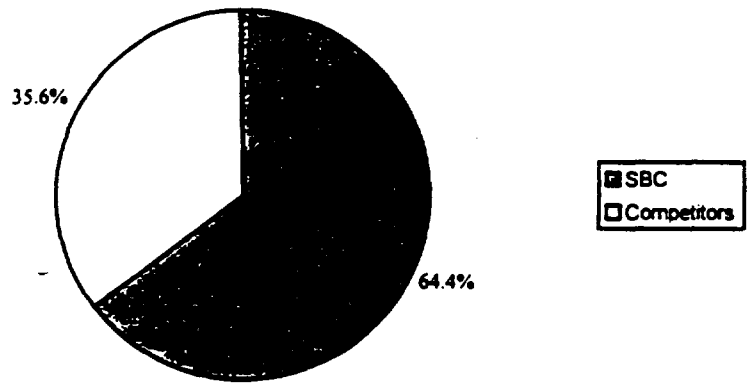
OKLAHOMA CITY – COMPETITIVE LANDSCAPE

Overview

Oklahoma City, the state capital, just makes it into the 50 largest metropolitan areas nationwide and it is one of SBC's more competitive territories. There are an abundance of opportunities for competitors in Oklahoma City's high-capacity market. The health services industry is expected to grow and there are aerospace, telecommunications and energy businesses located in the area. Additionally, the Tinker Air Force Base is not only a large employer, but it also presents an opportunity for competitors if the military should need to upgrade its system to handle high-speed services. The primary competitors for high capacity service in Oklahoma City are WorldCom and Cox Fibernet.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Oklahoma City	64.4%	35.6%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
Oklahoma City	WorldCom	Fiber	118	65
	Cox Fibernet	Fiber	1020	240

WorldCom

Earlier this year WorldCom completed its merger with Brooks Fiber Properties. Brooks operated a sizable network in the Oklahoma City area (one of its first networks) since 1994. WorldCom owns 500 route miles of fiber in the state of Oklahoma and maintains 118 route miles with speeds up to OC-48 in the Oklahoma City area. A company representative stated that 37% of the network is currently being used. WorldCom routes a diverse portfolio of communications services via a Lucent 5ESS switch that has the capacity to connect up to 100,000 trunks. The switch has been active for over three years.

Cox Fibernet

Cox Fibernet, a wholly-owned subsidiary of Cox Communications, has been operating in Oklahoma City since September 1994. Cox provides service to virtually all of the nations large long distance companies as well as other businesses (small and large) via its extensive network. Cox's network is 1020 route miles. It is built of 100% SONET transmission equipment and consists of 65 self-healing rings. These rings are capable of carrying traffic with speeds up to OC-48, and the company reports that it currently uses only 30% of its network. Voice, data and video services are routed via a DMS500 switch that has been active since March 1997. To ensure network reliability, Cox employs two diverse paths and uses a ring-in-ring architecture. In the event a fiber is cut, traffic can be routed through the second path. Cox also maintains a network operations center that monitors the network 24 hours a day. The center operates, administers, manages and maintains the company's switched, packet-switched, data and cable television network.

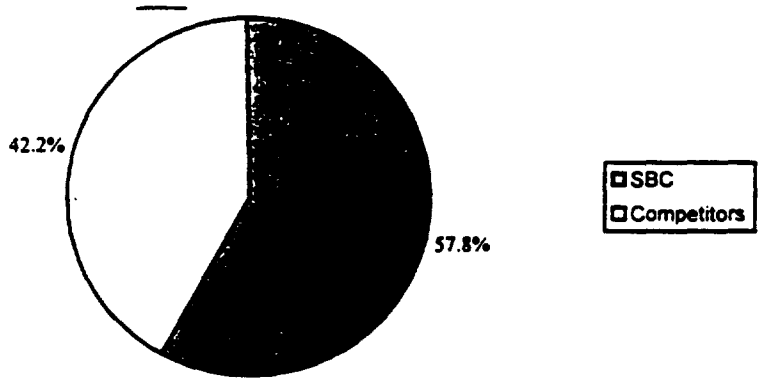
AUSTIN – COMPETITIVE LANDSCAPE

Overview

The current population for the greater Austin area is approximately 570,000 people. While Austin's main industries still are ranching, poultry, dairy, cotton, and grain, it has fostered a growing high-tech sector. Included in this segment of the economy is the University of Texas, Austin, which is a major center for research and development. It also includes major high-tech companies such as Dell Computer Corp., which has been adding thousands of jobs every year in recent history. Many of the PC maker's 7,500 jobs added during 1997 were in the Austin area. Additionally, the high-tech sector has a healthy share of start-up businesses, with 178 new high-tech start-up companies emerging in 1997. Government currently accounts for 20.9% of the jobs in the area, with the University of Texas, Austin, contributing significantly to that figure. However, the local economy has become less dependent on this sector in recent years and its size has declined from its 1988 share of 28.3%.

To the extent that the high-tech companies and the local economy as a whole continue to grow in the area (the former is to some extent tied to global markets such as Asia [e.g. Motorola]), the demand for HICAP local services is also expected to grow.

The three main competitors in Austin were e.spire, WorldCom (formerly Brooks) and Time Warner.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Austin	57.8%	42.2%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
Austin	e.spire	Fiber	20	115
	WorldCom	Fiber	80	Unknown
	Time Warner	Fiber	280	105

e.spire

e.spire has been operating as a facilities-based carrier in Austin, offering high-capacity and local switched services, since October of 1997. The company has a Lucent Technologies 5ESS switch and a network that currently consists of 3 route miles. e.spire intends to expand the network to 20 miles during the fourth quarter of 1998. It currently has connected 115 buildings to its network. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

They have recently launched a new service, e.spire PLATINUM. This service will allow small and medium sized business to receive a variety of voice and data services from a single carrier and one integrated invoice. This attractive bundling will also provide business customers with flat rate local service. This service is now being offered in 18 markets, including Austin, and will be offered in all of e.spire's markets by the end of 1998.

WorldCom

WorldCom (formerly Brooks) recently received all required approvals to acquire MCI. The new entity is MCI WorldCom. WorldCom added a Nortel DMS-500 switch to their existing network in January of 1998. The DMS-500 can handle from 480 to 10,000 trunks and can serve up to 1.5 million call attempts during the busiest hour of the day. Additionally, it can handle 1,000 to 100,000 lines, depending on how it is configured. The company's network currently spans 80 route miles. It contains 3 SONET rings that run at OC-12. Company representatives estimate the portion of network capacity that is currently utilized to be 45%.

Time Warner

Time Warner continues to expand its network in Austin. The company also recently entered into an agreement with IXC Communications to offer bundled local and long-distance service.

Time Warner added 30 route miles to its network in Austin that has been operational since 1994. This expands its coverage to 280 route miles of self-healing 100% SONET fiber. The network consists of 27 SONET rings, 26 of which run at OC-12 and 1 of which runs at OC-48. Company representatives estimate the portion of network capacity currently being used is 50%.

The company continues to use its Lucent Technologies 5ESS switch that it activated during the third quarter of 1996. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle

between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

There are 105 buildings connected to the network. The areas served by the network include the majority of downtown Austin, the University of Texas, West Lake Hills, and Rollingwood.

Time Warner also recently announced a two-year agreement with IXC Communications enabling Time Warner to offer bundled local and long-distance services to its business customers nationwide. Under terms of the agreement, IXC will provide a wide variety of long-distance, 800, operator assisted, directory assistance, and calling card services.

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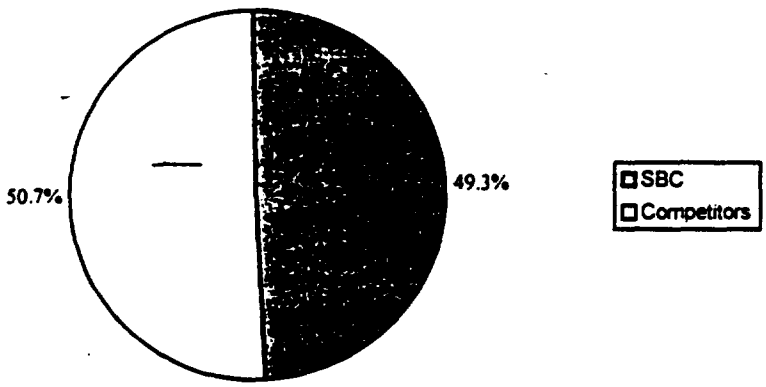
DALLAS – FT. WORTH – COMPETITIVE LANDSCAPE

Overview

Dallas, widely regarded as the most competitive communications market in the state of Texas, has a population of more than 3 million people. The greater Dallas-Fort Worth area, with approximately 4.5 million people, is the third largest in SBC's territory and ninth largest metro area nationwide; it is expected to be fourth nationally by 2010. Dallas is also SBC's most competitive high capacity market. Over the years SBC's high capacity market share has been significantly eroded and now stands at just 49%. With 16 of the nation's largest private firms and 15 of the largest public firms, the Dallas-Fort Worth area provides a large pool of potential HICAP customers. In addition, Dallas has witnessed a large construction boom through building new facilities and expansion since 1989. Last year alone, 308 facilities were built in the Dallas metro area. The competitors in the Dallas-Fort Worth metropolitan area are WorldCom, TCG, MCI and e.spire.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Dallas/Fort Worth	49.3%	50.7%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
DFW	WorldCom	Fiber	700	250
	TCG	Fiber	500	Unavailable
	MCI	Fiber	25	30
	e.spire	Fiber	220+	Unavailable

WorldCom

WorldCom (formerly MFS) has been operating its fiber network in the greater Dallas-Fort Worth area for several years. The company rolled out local services during the fourth quarter of 1996, although it had been offering access and data services prior to that time. WorldCom is a facilities-based local provider with one DMS500 switch and 700 route miles of fiber across the Dallas-Fort Worth metro area. WorldCom's switch has been active for six months, and has the capabilities to connect up to 100,000 trunks and to carry a multitude of services. With the completion of WorldCom's acquisition of MCI, the company will gain an additional 25 miles of fiber, an MCI DMS100 switch that has been operational since December 1997, and 30 lit buildings. WorldCom will boost its total number of on-net buildings to over 250. MCI's switch is located about 15 miles northeast of Dallas in Richardson, and it serves customers within a 20-mile radius of Dallas. However, the DMS100 switch was designed for local level end-office use.

Large business customers can connect directly to long distance providers through WorldCom. Although WorldCom prefers to provision and control circuits end to end, it is known to resell service to customers far removed from its fiber network.

TCG

TCG has a 5ESS switch installed that has been operational since 1996. The switch routes local, long distance and data services over the company's 500-mile network. The network, which has been operational since 1991, consists of four SONET rings and runs through the central business district in downtown Dallas and extends into Irving and Las Colinas and northward to Carrollton, Addison, Richardson and Plano. TCG officials report that the network is currently operating at 60% capacity. Additionally, in case of an outage, TCG will correct problems with switched lines or circuits within two to three hours. For problems with any circuit or line billed by TCG to the end-user, it operates a trouble-reporting 800 line that is available 24 hours a day, seven days a week.

MCI

MCI operates two SONET rings in Dallas' central business district (over 25 miles of fiber) connecting 30 of the area's larger buildings. MCI rolled out local switched services in 4Q97 when it turned up its Nortel DMS 100 central office switch in its downtown node. Unlike TCG and WorldCom, MCI generally does not build geographically expansive networks capable of reaching outlying suburbs. Instead, it relies on the RBOC and other carriers to provide it with type II service (with a T-1 link between the customer premise and the MCI central office) or wholesale lines that it can resell to its customers.

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e.spire

Of the facilities-based competitors in the Dallas area, none has been more active in expanding its network over the last year than e.spire. Currently, it operates a 220+ route mile network serving business customers throughout the Metroplex. Originally, e.spire's network was confined to Fort Worth's central business district, although it has been expanded to serve other areas.

All of e.spire's metropolitan area networks feature route diversity, electronic redundancy, and backup power supplies. The fiber backbone is capable of transmitting voice and data at speeds up to OC-48 (although most distribution rings operate at lower optical or electrical speeds). e.spire's network in the greater Dallas area is composed entirely of optical fiber; although type II transmission may occur over LEC copper facilities. To supplement its private line and data product offerings, e.spire began offering local switched services in the fourth quarter of 1996.

In 1996, e.spire installed a Lucent 5ESS central office switch in its Fort Worth node to route local and intraLATA traffic. Recently e.spire installed a second Lucent 5ESS switch in Dallas.

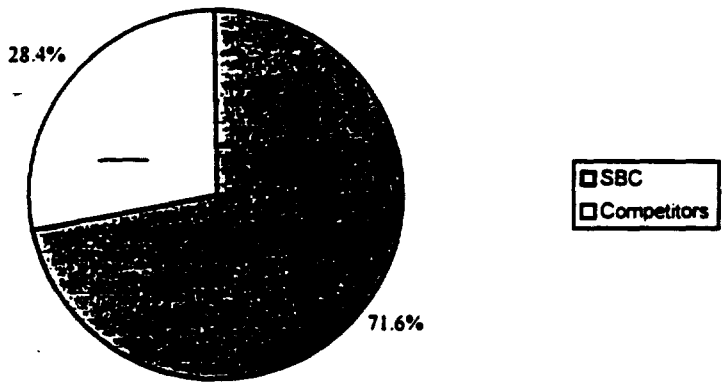
Thus far, e.spire has concentrated heavily on increasing its fiber presence in the greater Dallas area; however, it will adhere to a different philosophy during 1998. e.spire marketing professionals report that connecting buildings to the network has become a higher priority than adding route miles. This is particularly true of business-intensive suburban areas. This will allow it to control lines and circuits end to end and rely less on type II connections and resale.

e.spire has an aggressive national agenda as well. It has installed 20 switches to date and intends to activate 5 new Lucent 5ESS-2000 by the end of 1998. By the end of the second quarter of 1999 it plans to have installed 36 switches.

EL PASO – COMPETITIVE LANDSCAPE

Overview

Once a thriving manufacturing area, producing goods ranging from thermometers to blue jeans, this sector has declined in the last five years in El Paso. Companies such as Levi Strauss, Wrangler, Lee and Tex-Mex Apparels have slowly exited this depressed area for lower-wage workers across the border. Prospects in the near future appear dismal as El Paso is ranked in the top 10 of the fastest growing metropolitan areas in terms of population, while it has an unemployment rate well above the national average (11.4%). El Paso, the 60th largest metropolitan area nationwide, is referred to as having a future of "growth without prosperity." Slowly, the community has begun to train people for higher-skilled jobs. For example, Acer Computer has opened a computer assembly plant in the area. However, El Paso currently lacks the high-capacity customer presence seen in the rest of SBC's territory. As of 2Q98, e.spire is the sole competitor in El Paso.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
El Paso	71.6%	28.4%

Competitor

MSA	Competitor	Facility Type	Route Miles	Building on Network
El Paso	e.spire	Fiber	100	50

e.spire

e.spire is growing at a phenomenal rate. With the company's evolution from a CAP to a CLEC, e.spire was able to increase its revenues by 500% last year, grossing $59 million. El Paso is just one of 32 cities where e.spire provides integrated voice and data communications services. e.spire's one Lucent 5ESS-2000 switch in El Paso, which was turned up June 1, 1998, is collocated with the company's local fiber network and its national ATM backbone network. The company's 100% SONET network has been operational in El Paso since October 1995. The 100-mile network runs south of Interstate 10 to Hawkins and through the Butterfield Business Park, Fort Bliss, Biggs Airfield, Sierra Medical Center, Sunland Park, Northwestern Corporate Center, and Doniphan areas. The Lucent 5ESS 2000 is the latest in switching technology, capable of routing a variety of telephony services such as local, long distance and data services, and it has nine times the capacity of older model five series Lucent switches.

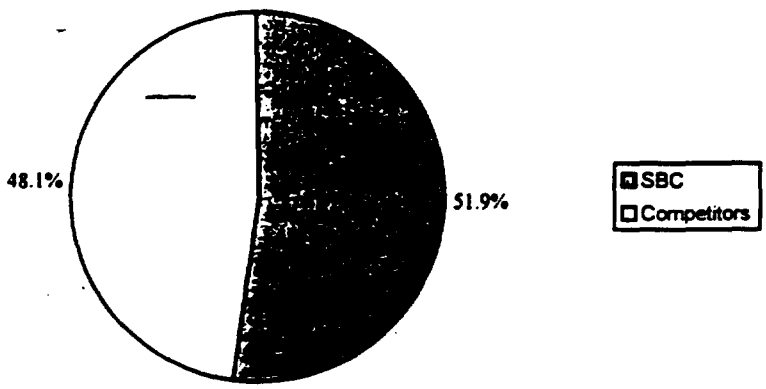
As e.spire continues expanding, the company intends to increase its depth in existing markets by bringing more buildings on-net. Currently, e.spire serves major commercial and government office buildings in El Paso, and, as of July of this year, the company has approximately 50 lit buildings.

HOUSTON – COMPETITIVE LANDSCAPE

Overview

While the industries of oil/gas exploration and chemicals/refining have traditionally made up the core of Houston's economy, this has become less and less the case during the last fifteen years. In 1998, the fastest growing segments of Houston's economy have been electronics, engineering/design services, and health care services. Additionally, the area's job growth for the period 1995-2005 is projected to be 332,780. Population growth in Houston for the same time period is projected to be 887,200. In recent years population's growth has been strong, adding about 2.5 percent more people per year between 1994 and 1997. The growth in these three industries as well as in population and jobs, will likely contribute to steady growth of the market in Houston during the coming years. Consequently, there is a demand for High Capacity services.

The four main competitors in the Houston market during the second quarter of 1998 were WorldCom, TCG, Time Warner, and MCI.



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
Houston	51.9%	48.1%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
Houston	TCG	Fiber	600-800	unavailable
	MCI	Fiber	20	50
	WorldCom	Fiber	200	unavailable
	Time Warner	Fiber	400	unavailable
	GST Telcom	Fiber	8	unavailable

TCG

TCG was recently acquired by AT&T. The combined company will be able to offer facilities based competitive bundled services.

TCG upgraded its switch in the area from a Nortel DMS-100 to a DMS-500. Depending on call configuration, the DMS-100 is capable of handling between 1,000 and 100,000 lines. The DMS-500 can now handle from 480 to 10,000 trunks and can serve up to 1.5 million call attempts during the busiest hour of the day.

The company's network has between 600 and 800 route miles in the Houston area. TCG runs a Network Operations Center in Staten Island, NY from which it constantly monitors networks and coordinates responses to problems.

TCG began offering its ISP service, CERFnet, in Houston during the second quarter of 1998. The company provides a direct connection to the Internet backbone and a full range of Internet-related services for corporate clients. The Internet backbone is self-healing and supports speeds up to OC-3. Additionally, the service can be used with high-speed frame relay and ATM for data. Dedicated web server hosting is another available feature.

MCI

WorldCom recently acquired MCI. The new entity is MCI WorldCom. Although MCI has been offering connectivity services in the greater Houston area for the past three years, it only rolled out local exchange services in the third quarter of 1997. MCI operates a fiber network in Houston's central business district primarily designed to serve the larger, communications-intensive businesses located in multi-tenant buildings. The network currently extends approximately 20 route miles. It consists of no fewer than two interconnected fiber rings featuring route and central office diversity as well as electronic redundancy to reroute traffic. The company uses a Nortel DMS-100 switch that it installed in 1997. It can handle between 1,000 and 100,000 lines and serve up to 1.5 million call attempts during the busiest hour of the day. Unlike the WorldCom and TCG networks, MCI's network is in one area and relies on other carriers to connect its customers to the MCI central office via leased T-1 facilities. Additionally, MCI resells local services to customers located in outlying suburbs.

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As stated, MCI's network is concentrated in Houston's central business district. It currently connects more than 50 multi-tenant buildings and passes several more. MCI does not connect a building to its network before it has secured a long-term local or high capacity account in the building. MCI generally targets the large business market and its existing long-distance customer base for local exchange services

WorldCom

WorldCom recently completed its acquisition of MCI. The new entity is MCI WorldCom.

WorldCom (formerly Brooks) activated its Nortel DMS-500 switch in the area in January of 1998 and offers a variety of high capacity services. Their network in Houston extends 200 route miles. The switch can handle from 480 to 10,000 trunks and can serve up to 1.5 million call attempts during the busiest hour of the day. Additionally, it can handle 1,000 to 100,000 lines, depending on how it is configured.

Time Warner

Time Warner has been offering local switched services since the third quarter of 1997. The company operates one of the larger networks in the area.

Time Warner has been providing local switched services in Houston since September of 1997. Their network consists of more than 400 route miles of fiber. The company operates a Lucent Technologies 5ESS switch. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

GST

GST activated its Siemens Class 5 switch in Houston in March of 1998. Their area network currently consists of 8 route miles. Siemens Class 5 switches are capable of supporting ISDN, Advanced Intelligent Network, advanced business and residential services, advanced Centrex, automatic call distribution, and PCS.

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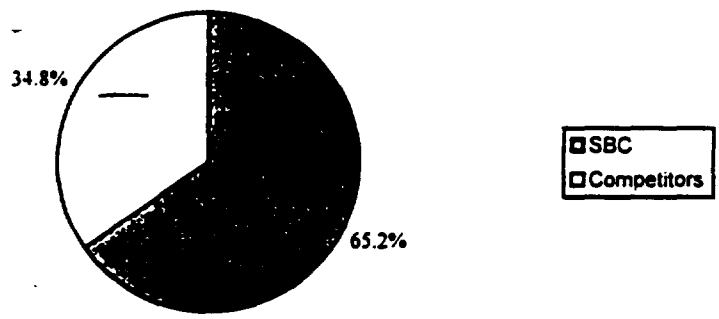
SAN ANTONIO – COMPETITIVE LANDSCAPE

Overview

San Antonio is the tenth largest city in the U.S. and home to five of the largest military installations in the nation. It is also the industrial, trade, and financial center of an agricultural region. The population of the greater San Antonio area is approximately 1.5 million people. In recent years the city has been aggressively encouraging corporate relocations. Consequently, numerous corporate campuses and telemarketing centers have been developed in northwest San Antonio. An economic characteristic that sets San Antonio apart from the rest of the country for enterprises such as telemarketing centers is its cheap and ample labor. 33% of its labor force is less than 20 years old, compared with 29% nationally. This translates into tens of thousands of new workers entering the labor market each year which has helps the city attract this kind of business. Assuming this trend continues, the growth of the High Capacity market in San Antonio will be healthy in the years to come. Competitors include Time Warner, WorldCom, MCI and ICG ChoiceCom



Source: QUALITY STRATEGIES, Washington, D.C.

MSA	SBC	Competitors
San Antonio	65.2%	34.8%

Competitors

MSA	Competitors	Facility Type	Route Miles	Building on Network
San Antonio	Time Warner	Fiber	500	180
	WorldCom	Fiber	80	25
	MCI	Fiber	unavailable	unavailable
	ICG ChoiceCom	Fiber	unavailable	unavailable

Time Warner

Time Warner was the most formidable competitor during the second quarter of 1998. Currently, Time Warner Communications' fiber facilities are far more extensive than those operated by other providers in the area. At present, its network encompasses 500 route miles of fiber capable of serving San Antonio's central business district as well as several business-intensive suburban areas including the San Antonio International Airport vicinity, Alamo Heights, Balcones Heights, Leon Valley, and Kirby. Additionally, Time Warner's network connects approximately 180 single and multi-tenant buildings both inside the city as well as in the suburbs. Time Warner operates its network operations center in the greater Denver area, from which it monitors all of its networks continuously. The company believes that this establishment is a preventative measure to keep network outages from affecting customers' communications ability.

Time Warner personnel feel that the company's network is more reliable than any other in San Antonio. The network is made up of 5 SONET rings, 3 of which run at OC-48 and 2 of which run at OC-12. Company representatives estimate the portion of network capacity currently utilized to be approximately 25%. Time Warner constructs all of its metropolitan area networks according to SONET ring architecture allowing for route diversity and the ability to reroute traffic electronically in the case of a fiber cut. Time Warner is so confident about its network's capabilities that it will switch unsatisfied customers back to their original providers and incur the costs for doing so (within the first 90 days of service). Time Warner has been in San Antonio's High Capacity market for the past five years, although it only began offering local services this year.

Time Warner routes local exchange traffic with a Lucent 5ESS located in its central equipment site at 100 Taylor Street. The Lucent 5ESS switch can be configured to handle as many as 100,000 trunks. It can also be specially engineered to provide capacity in excess of 100,000 trunks. Additionally, it can handle between a few hundred and 200,000 subscriber lines. The 5ESS is capable of switching ISDN voice and data, local voice calls, long distance calls, Internet access, wireless PCS, Advanced Intelligent Network services, interactive video and multimedia services.

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WorldCom

Yet another formidable competitor in the greater San Antonio area is WorldCom (formerly Brooks). WorldCom acquired Brooks Fiber earlier in the year and MCI recently.

WorldCom became a player in the market in March 1997 when it purchased the Texas networks owned and operated by Metropolitan Access Networks (MAN). Currently, WorldCom operates a network in the area measuring approximately 80 route miles and connecting approximately 25 buildings; mostly in San Antonio's central business district.

WorldCom has a Nortel DMS-500 switch that can now handle from 480 to 10,000 trunks and can serve up to 1.5 million call attempts during the busiest hour of the day. Additionally, it can handle 1,000 to 100,000 lines, depending on how it is configured. Generally, WorldCom's networks boast backbone speeds up to OC-48 and are constructed according to SONET ring architecture. WorldCom rarely (if ever) experiences network downtime; largely due to the way the network has been built. All backbone and distribution rings feature diverse routes in case a problem arises with one of them. Additionally, the network features electronic redundancy and backup power supplies to reroute traffic in the event of a fiber cut (generally within milliseconds).

One of the company's competitive advantages is its ability to offer seamless customer service once the relationship has been established. WorldCom monitors all of its networks from its St. Louis headquarters 24 hours a day, seven days a week. The company hopes this will allow it to catch mistakes before its customers do and lose the ability to communicate for even a few seconds.

Because it has not connected a large number of buildings to its network in San Antonio, WorldCom provides both facilities-based and resold services. Business development professionals estimate that approximately 25-35% of all local customers receive resold lines from one provider or another. However, WorldCom hopes to migrate the majority of these customers over to its own facilities in the near future as it expands its network.

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MCI

Late in 1997, MCI entered the San Antonio communications market when it established fiber facilities in the central business district.

In November of 1997, MCI became the first interexchange carrier to enter the San Antonio local service market when it turned up its fiber network downtown. Almost exclusively, MCI installs facilities downtown to serve its largest customers via its own facilities end-to end. The company's local networks primarily target the buildings of its largest customers. MCI offers those customers local service at a discount. Early in the fall of 1997, MCI entered the local switched market by reselling Southwestern Bell local access lines in anticipation of its own facilities-based rollout. Primarily, MCI markets local services to larger business customers with whom it already has long distance relationships. Account representatives in other markets have reported long distance customers to be an excellent sales channel for switched and high capacity services.

In San Antonio, MCI's downtown network features two self-healing SONET rings with backbone speeds up to OC-48 (although the vast majority of customers utilize DS-3 or OC-3 interfaces at their buildings). MCI has been using a DMS-100 switch that is capable of handling between 1,000 and 100,000 lines and can serve up to 1.5 million call attempts during the busiest hour of the day. The network backbone features transmission speeds up to OC-48, route and central office diversity, electronic redundancy, and backup power supplies.

ICG ChoiceCom

ChoiceCom, a new partnership between CSW and ICG Telecom, could pose one of the most significant threats to SBC in the greater San Antonio area. The alliance was announced in 1997 and San Antonio became one of the joint venture's first markets. In January of this year, ChoiceCom turned up its first two switches in the state of Texas, one in San Antonio and the other in Austin. It now markets local exchange service, high capacity, data services, internet access, and long distance over its own facilities to customers located on or near its San Antonio fiber network. ChoiceCom executives indicate that the company's target market base consists primarily of small and medium businesses; which stands in contrast to ICG's traditional base of large businesses and interexchange carriers. ChoiceCom offers facilities-based and resold services.

ChoiceCom could pose a long-term threat to SBC's market share in the region for a number of reasons. First of all, there seems to be a synergy between each company's core competencies. ICG has proven itself a capable competitor in numerous markets and generated substantial market share in California and Colorado. Additionally, CSW has acquired rights of way throughout the metro area and installed dark fiber across the state of Texas. ICG has shown a propensity to partner with electric utilities in order to establish its facilities rapidly and begin working on its market presence.

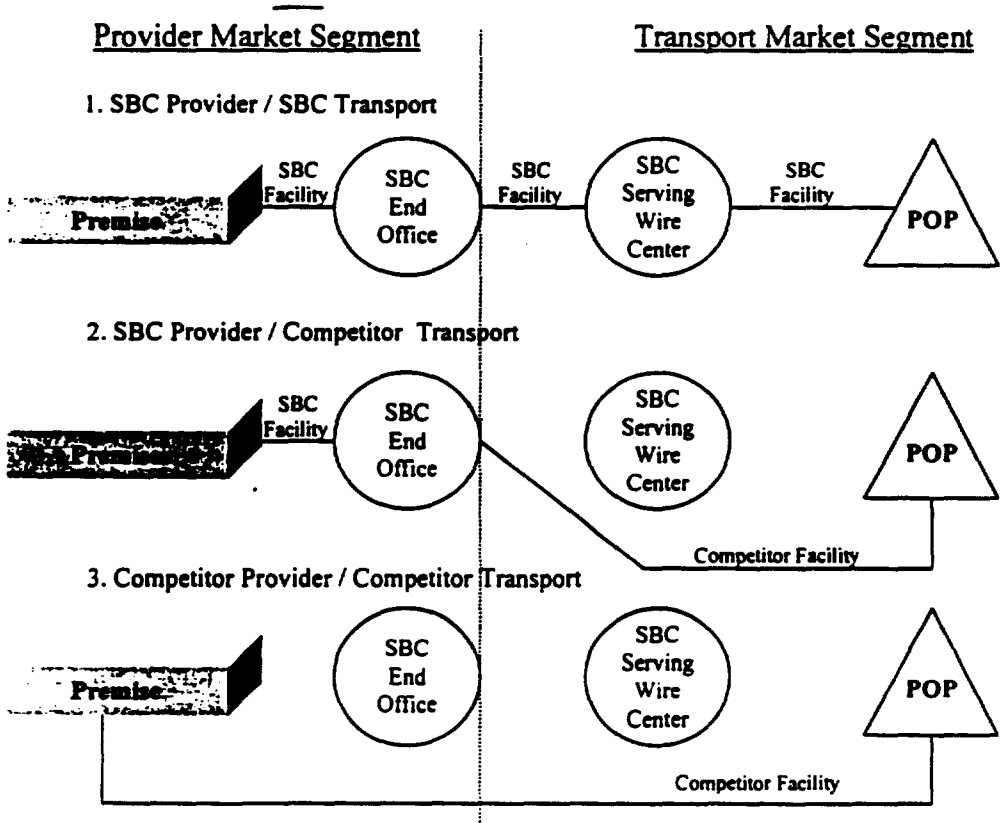
METHODOLOGY

QUALITY STRATEGIES believes that quantitative market share data can be coupled with qualitative competitive data to accurately describe and assess the market for high capacity circuits. The information that is provided in each section is designed to supplement that from the other. This analysis is based on primary and secondary market research conducted for SBC. Market Share estimates reflect second quarter, 1998 analyses. Overall Provider estimates are based on a 95% confidence interval with a ±5% margin of error. Transport market share estimates are primarily the result of extensive competitive research.

To formulate market share estimates, QUALITY STRATEGIES considered several inputs. Results are primarily based on primary, market research surveys that elicit share figures based on end user data. Additionally, QUALITY STRATEGIES analysts conducted an exhaustive competitive research analysis to gather additional information about each market examined.

The following diagram depicts the various components of the Overall High Capacity Market, which is the combination of the Provider and Transport Market segments.

Overall High Capacity Market



PROVIDER MARKET SEGMENT

The Provider Market segment is defined as DS1 and DS3 service provided by SBC or a Competitor over its own facilities.

Market share results for the Provider Market segment are primarily based on actual usage obtained from surveys. Other sources of market share results include historical trend analysis and competitor research. Market share results for this project are based on customer usage as of the second quarter of 1998. The following steps illustrate our process for delivering Provider market share results for SBC:

Step 1: Competitor and Industry Analyses

Multiple inputs to sampling approach and sample plan, including competitor research, proprietary regional and national databases, and pre-survey screeners.

Step 2: Establish Sample Plan and Quotas

Develop preliminary market share estimates, establish quotas for appropriate strata, including high penetration and low penetration strata, and sub-strata (demographics, spending levels, etc.).

Step 3: Develop and Select Sample

Develop and select stratified random sample from sampling frame constructed from multiple sources, including third-party lists of businesses and proprietary databases.

Step 4: Conduct Fieldwork

Collect survey data and invoices. Based on the quotas established in the sampling plan, we conduct fieldwork to collect three inputs - short form surveys, long form surveys, and invoices - on which market share results ultimately are developed.

Achieve quotas for strata, and supplement with additional interviews for low incidence strata. Calibrate self-reported data with appropriate invoice bias factors.

Step 5: Analysis and Reporting

Analyze survey data and develop final results.

SAMPLING METHODOLOGIES

We develop our sampling plan using stratified random sampling techniques, which provide for efficient statistical estimates by designing the sampling plan based on particular strata (e.g., mix of utilization of competitors, demographic characteristics, geographic location, etc.) that we have developed and successfully applied over the past ten years. We utilize a mix of random and targeted surveys based on the stratified random sampling techniques. We use the random surveys to qualify respondents for different quotas established in our sampling plans. We also use the data obtained in the random surveys to establish weights for different strata when we reconstitute market share results.

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STATISTICAL VALIDITY

This project is designed to provide estimates of high capacity (DS-1 and above) shares that are statistically valid for SBC's Provider high capacity services compared to competitive alternatives.

High Capacity Provider market share results are designed on a 95% confidence level with ±5% margins of error. Our survey results may have error margins as low as ±2.4% on a 95% confidence interval.

INTERVIEW PROCESS

In order to obtain the most useful information, we interview the decision-makers of telecommunications services. For many businesses, these decision-makers may be Office Managers, Operations Managers, LAN/MIS Managers or even Owners.

We use our standard high capacity provider survey to collect data from business customers. QUALITY STRATEGIES surveyed business customers regarding their usage of high capacity DS-1 and DS-3 services. The survey includes questions on all competitive DS-1 and DS-3 services, including competitor fiber-based services, microwave services, satellite services, and customer-owned facilities. We also use surveys to collect demographic information, perception data, and any other pertinent information.

TRANSPORT MARKET SEGMENT

The Transport Market segment is defined as DS1 and above service provided to carriers by SBC or a competitor over its own facilities. Data for transport market share is based on the following sources:

1. **IXC Interviews:** IXC interviews provide insight into specific usage of both competitor (CAP/CLEC) and SBC-provided Transport circuits. Representatives of the following IXCs were interviewed for this report:
   - AT&T
   - Cable & Wireless
   - Frontier
   - LCI
   - MCI
   - Sprint
   - WorldCom
   - Others

2. **Competitor Interviews:** Competitor interviews provide information regarding the number of stand alone Transport circuits and circuits riding on the Transport facilities to the IXC POPs. Representatives of the following competitors (CAP/CLECs) were interviewed for this report:

- Cox
- e.spire
- ELI
- GST
- ICG
- ICI
- MCI (formerly MCIMetro)
- Nextlink
- TCG
- Time Warner
- WorldCom

3. **Competitive Analysis:** Competitive analysis of leading IXC and other transport customer usage provide valuable insight into the market share between SBC and competitors. In addition, QUALITY STRATEGIES' utilized competitor and IXC profiles database, SBC historical transport and DS1/DS3 provider market shares, and transport and DS1/DS3 provider market shares of other RBOCs to provide further insight into the market share between SBC and competitors.

OVERALL HIGH CAPACITY MARKET SHARE

The Overall High Capacity Market is defined as DS1 and above service provided by SBC or a competitor over its own facilities. The Overall High Capacity market share is based on combining Provider and Transport Market shares. In developing SBC's Overall High Capacity Market Share, QUALITY STRATEGIES established unique weights for each metro. To develop these weighting factors, QUALITY STRATEGIES evaluated available information on historical equivalent circuit market sizes for DS1/DS3 Provider and Transport markets. QUALITY STRATEGIES also evaluated in-house, proprietary data on similar metros. For many years, QUALITY STRATEGIES has tracked the High Capacity market for other RBOC clients. Thus, we have equivalent circuit market size information for a number of metros. Using population, other demographic information, the number of existing competitors, the status of market share erosion, and other factors, QUALITY STRATEGIES evaluated similarities between a SBC metro and other RBOC metros. In many instances, similarities can be found in more than one metro. In addition, competitor information was evaluated and incorporated. QUALITY STRATEGIES has been tracking competitors across the country for over 10 years. Our internal databases on competitors provide valuable inputs. All of these inputs have been considered in the development of unique weights for each SBC metro.

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MARKET SHARE BASED ON EQUIVALENT CIRCUITS VS. REVENUES

It has been our experience for over 10 years that a greater level of accuracy is achieved by conducting market share analysis by equivalent circuits.

The key issue is whether there would be a significant difference in market share depending on how it was measured: in terms of equivalent circuits or in terms or revenues. Our experience in this area has been that in established DS1/DS3 Provider and Transport Markets, where the competitors have been in the market for a few years, we find that the competitors, in some instances, have charged a premium price. This would translate to greater erosion in market share for RBOCs if analyzed in terms of revenues than in terms of equivalent circuits.

In emerging DS1/DS3 Provider and Transport Markets, where the competitors are just entering the market, we find that the competitors undercut RBOCs on price. This would translate to less erosion in market share for RBOCs if analyzed in terms of revenues than in terms of equivalent circuits.

We find that there would be a difference in market share between revenue measurement and equivalent circuit measurement. How much of a difference would depend on the specific conditions in the marketplace. It is heavily dependent on the pricing strategy of the competitors, which are affected by many factors including the network utilization level, the geographic location, and the number and overall strategy of the existing competitors. There would thus be an increased volatility in market share if measured in terms of revenues than in terms of equivalent circuits.

In general, we have found that the share difference between revenue measurement and equivalent circuit measurement to be relatively small and would not change the direction the market is headed.

COMPETITIVE LANDSCAPE

The competitive landscape is comprised of information gathered by QUALITY STRATEGIES' analysts. Competitive information is gathered from numerous sources (both primary and secondary) including the following:

- Interviews with competitors and IXC professionals, including marketing, sales, administrative, executive, and technical personnel
- Interviews with large business end users
- Interviews with equipment vendors and equipment retailers
- Secondary market research including on-line sources and public information
- QUALITY STRATEGIES' extensive, national competitor database that has been maintained and updated continuously over the last ten years

CAPABILITIES AND EXPERIENCE

QUALITY STRATEGIES is a research and consulting firm working exclusively in the telecom industry. QUALITY STRATEGIES has provided competitive market information, including market share results and competitive market data to every RBOC and large LEC for the last decade. QUALITY STRATEGIES maintains its own professional team of analysts, methodologists, client service personnel and calling centers focused exclusively on the telecommunications market.

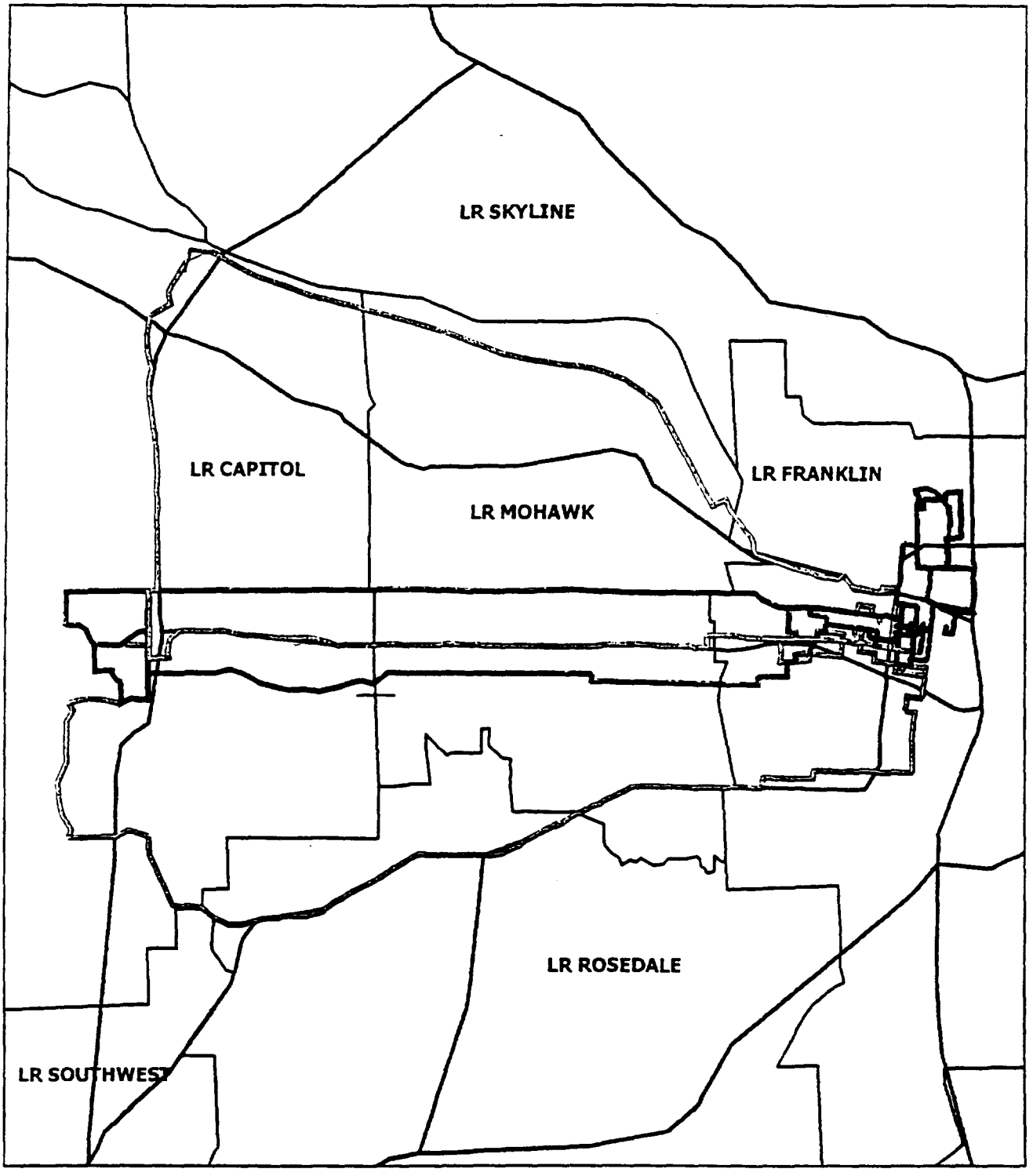
The SBC Telephone Companies
High Capacity Demand

	Metropolitan Statistical Area (MSA)	High Capacity Demand as a % of State	High Capacity Demand as a % of SBC
Arkansas	Fayetteville-Spnngdale, Ar.	23.3%	0.6%
	Ft. Smith, Ar.-Ok.	13.9%	0.4%
	Jonesboro, Ar.	4.9%	0.1%
	Little Rock-N. LittleRock, Ar.	45.0%	1.2%
	Memphis, Tn.-Ar.-Ms.	0.2%	0.0%
	Pine Bluff, Ar.	8.0%	0.2%
	Outside of Metropolitan County	4.6%	0.1%
	Total	**100.0%**	**2.7%**
California	Bakersfield MSA	1.5%	0.7%
	Chico-Paradis MSA	0.8%	0.4%
	Fresno MSA	2.3%	1.1%
	Los Angeles-Long Beach MSA	24.9%	11.7%
	Merced MSA	0.0%	0.0%
	Modesto MSA	0.8%	0.4%
	Oakland MSA	10.2%	4.8%
	Orange County MSA	11.1%	5.2%
	Redding MSA	0.6%	0.3%
	Riverside-San Bernardino MSA	1.6%	0.8%
	Sacremento MSA	6.9%	3.2%
	Salinas MSA	1.9%	0.9%
	San Diego MSA	8.3%	3.9%
	San Francisco MSA	10.8%	5.1%
	San Jose MSA	10.7%	5.0%
	San Lusi Obispo-Atascadero-Paso Robles MSA	1.2%	0.6%
	Santa Cruz-Watsonville MSA	0.2%	0.1%
	Santa Rosa MSA	1.0%	0.5%
	Stockton-Lodi MSA	2.6%	1.2%
	Vellego-Fairfield-Napa MSA	0.5%	0.2%
	Ventura-MSA	0.9%	0.4%
	Visalia-Tulare-Proterville MSA	0.1%	0.0%
	Yolo MSA	0.4%	0.2%
	Yuba City MSA	0.1%	0.0%
	Outside of Metrolpolitan County	0.5%	0.3%
	Total	**100.0%**	**46.8%**
Kansas	Kansas City, Mo.-Ks.	32.7%	1.3%
	Lawrence, Ks.	2.9%	0.1%
	St. Joseph, Mo.	0.0%	0.0%
	Topeka, Ks.	18.4%	0.7%
	Wichita, Ks.	24.2%	1.0%
	Outside of Metropolitan County	21.7%	0.9%
	Total	**100.0%**	**4.1%**
Missouri	Joplin, Mo.	2.9%	0.2%
	Kansas City, Mo.-KS.	33.0%	2.7%
	Springfield, Mo.	8.0%	0.7%
	St. Joseph, Mo.	1.1%	0.1%
	St. Louis, Mo.-Ill.	51.1%	4.2%
	Outside of Metropolitan County	4.0%	0.3%
	Total	**100.0%**	**8.2%**
Nevada	Las Vegas MSA	0.7%	0.0%
	Reno MSA	93.6%	0.4%
	Outside of Metropolitan County	5.7%	0.0%
	Total	**100.0%**	**0.5%**

The SBC Telephone Companies
High Capacity Demand

	Metropolitan Statistical Area (MSA)	High Capacity Demand as a % of State	High Capacity Demand as a % of SBC
Oklahoma	Enid, Ok.	0.9%	0.0%
	Ft. Smith, Ar.-Ok.	0.1%	0.0%
	Lawton, Ok.	4.2%	0.1%
	Oklahoma City, Ok.	48.4%	1.7%
	Tulsa, Ok.	38.4%	1.4%
	Outside of Metropolitan County	8.1%	0.3%
	Total	**100.0%**	**3.5%**
Texas	Abilene, Tx.	1.4%	0.5%
	Amarillo, Tx.	1.3%	0.4%
	Austin-San Marcos, Tx.	9.1%	3.1%
	Beaumont-Pt. Arthur, Tx.	1.4%	0.5%
	Brazoria, Tx.	0.1%	0.1%
	Brownsville-Harlingen, Tx.	0.9%	0.3%
	Corpus Christi, Tx.	1.7%	0.6%
	Dallas, Tx.	26.9%	9.2%
	El Paso, Tx.	2.0%	0.7%
	Ft. Worth-Arlington, Tx.	10.4%	3.5%
	Galveston-Texas City, Tx.	0.2%	0.1%
	Houston, Tx.	23.8%	8.2%
	Killeeen-Temple, Tx.	0.2%	0.1%
	Laredo, Tx	0.8%	0.3%
	Longview-Marshall, Tx.	1.8%	0.6%
	Lubbock, Tx	2.2%	0.7%
	McAllen-Edinburg-Mission, Tx.	0.9%	0.3%
	Odessa-Midland, Tx.	2.2%	0.7%
	San Antonio, Tx.	8.5%	2.9%
	Sherman-Denison, Tx.	0.0%	0.0%
	Tyler, Tx.	0.3%	0.1%
	Victoria, Tx.	0.1%	0.0%
	Waco, Tx.	2.0%	0.7%
	Wichita Falls, Tx.	0.7%	0.3%
	Outside of Metropolitan County	1.1%	0.4%
	Total	**100.0%**	**34.2%**

COMPETITIVE FIBER NETWORKS - LITTLE ROCK, AR

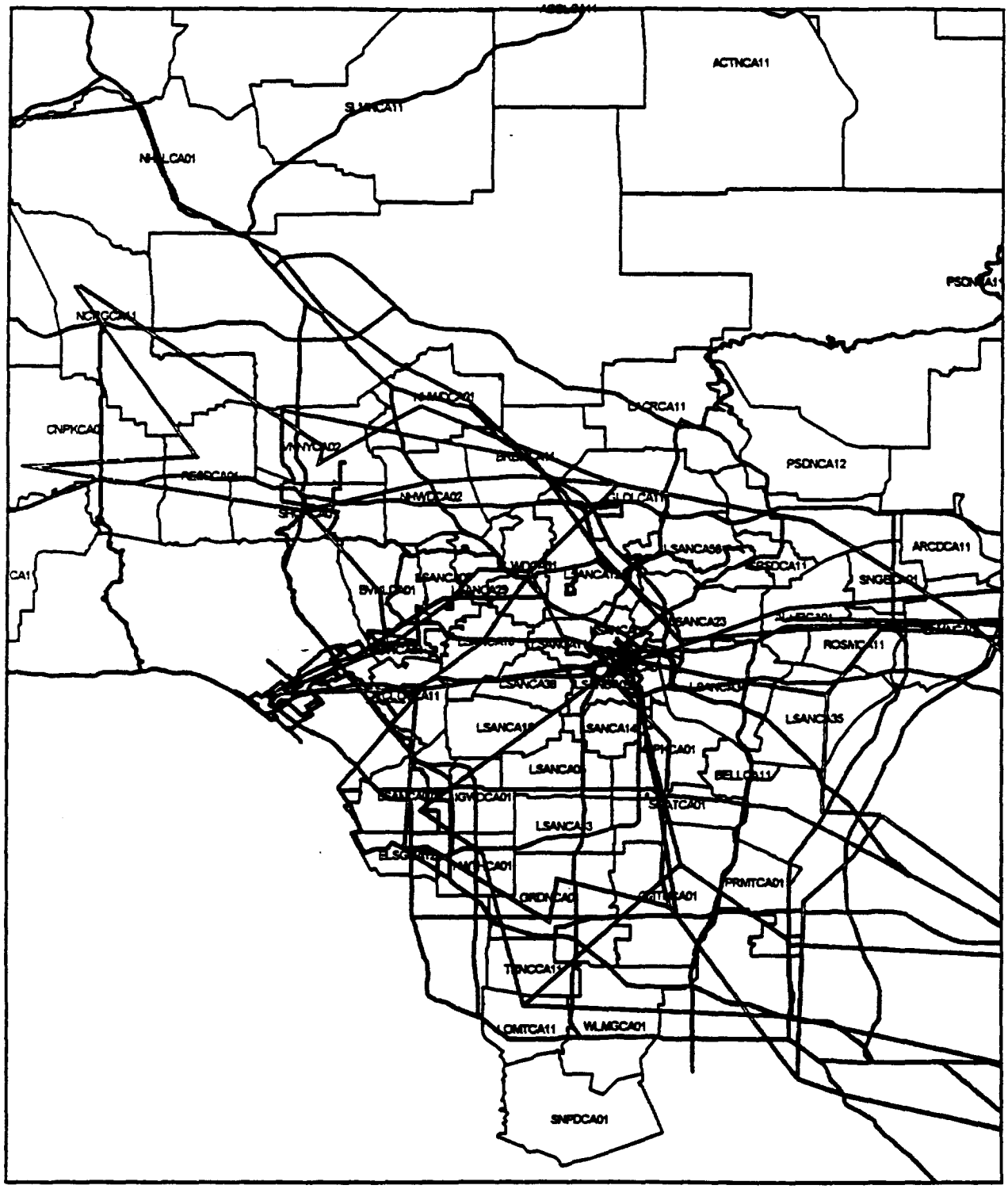


e.spire Fiber
ALLTEL Fiber
Brooks Fiber (now owned by MCI WorldCom)
Entergy Fiber (used by Hyperion)
Highways

Wire Centers

N

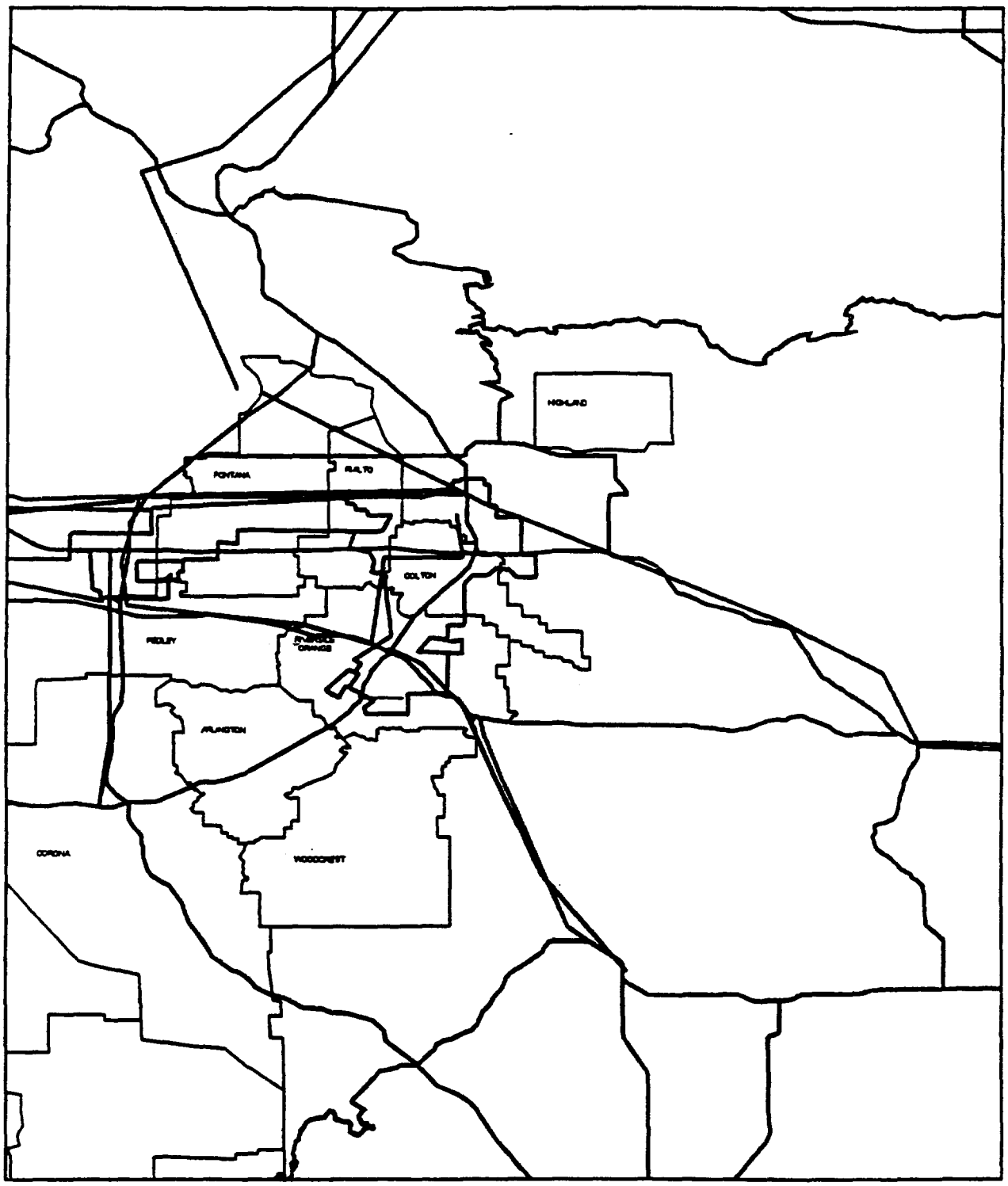
COMPETITIVE FIBER NETWORKS - LOS ANGELES, CA



NextLink Fiber
Linkatel Fiber (now owned by Nextlink)
TCG Fiber (now owned by AT&T)
MFS Fiber (now owned by MCI Worldcom)
GST Fiber
Electric Lightwave Fiber
Highways
Pactel Wire Centers

N

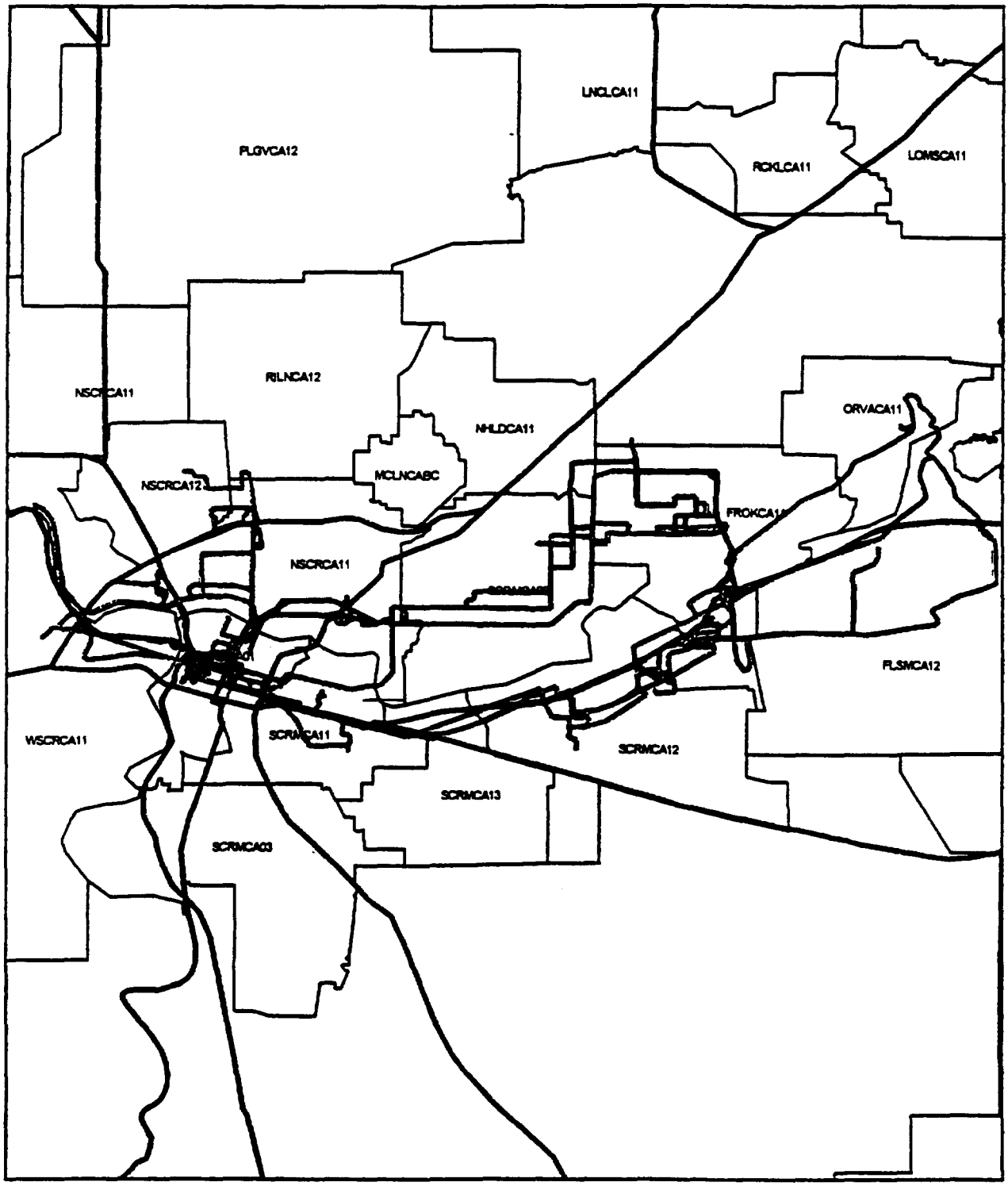
COMPETITIVE FIBER NETWORKS - ORANGE COUNTY, CA



GST Fiber
Highways
Pactel Wire Centers

N

COMPETITIVE FIBER NETWORKS - SACRAMENTO, CA



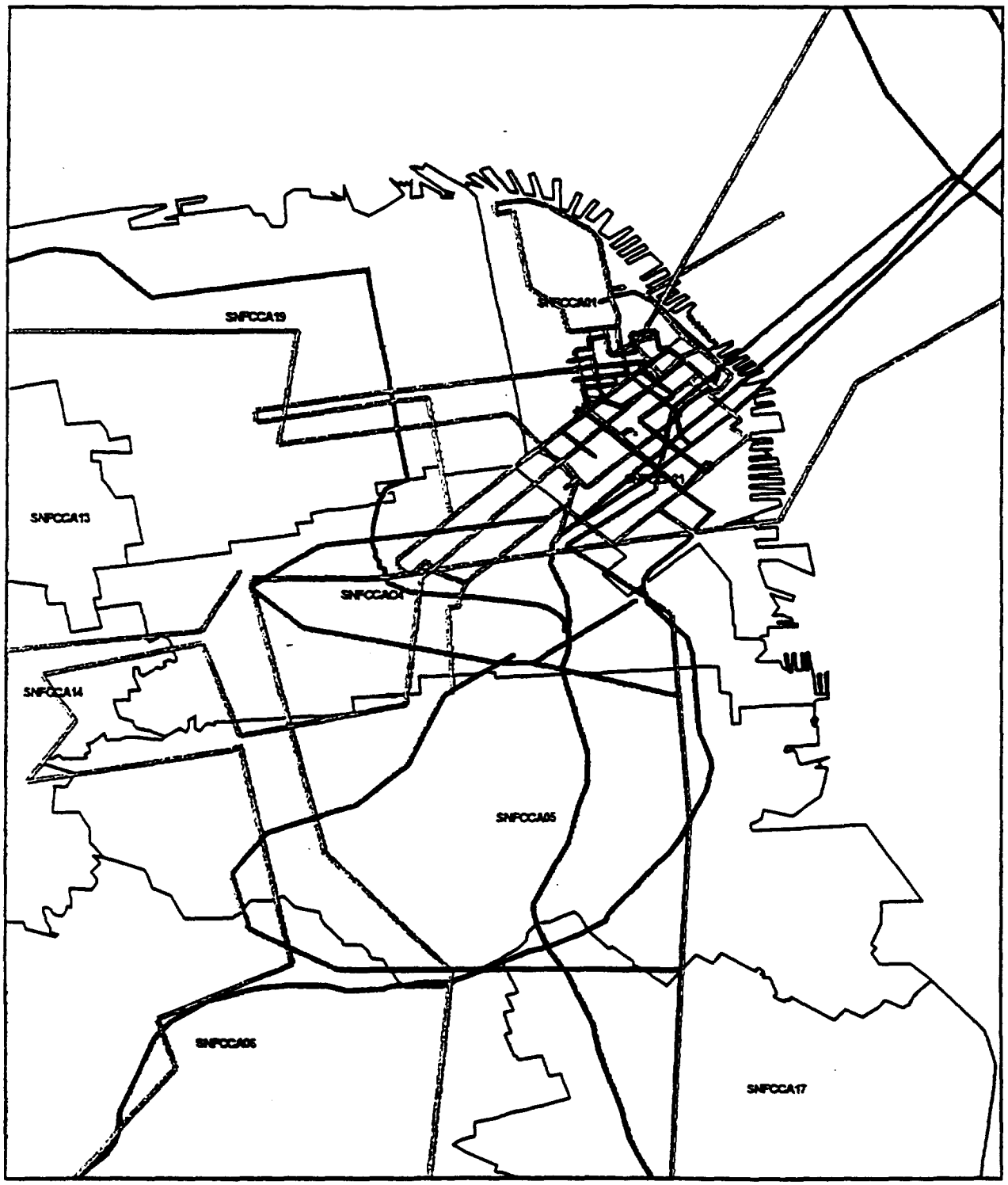
Electric Lightwave Fiber
Brooks Fiber (now owned by MCI WorldCom)

Highways

Pactel Wire Centers

N

COMPETITIVE FIBER NETWORKS - SAN FRANCISCO, CA



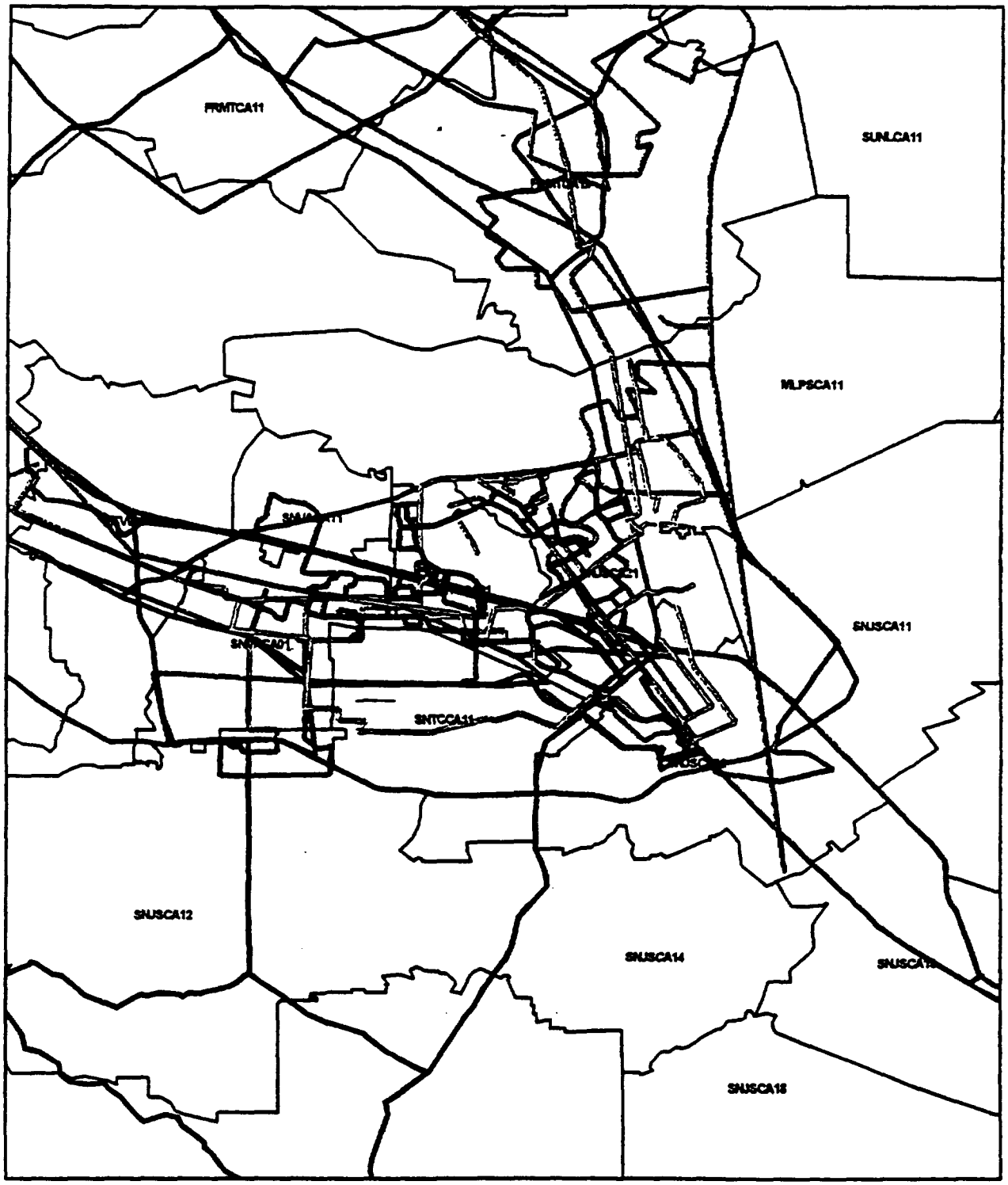
ICG Fiber
MFS Fiber (now owned by MCI Worldcom)
GST Fiber
TCG Fiber (now owned by AT&T)

Highways

Pactel Wire Centers

N

COMPETITIVE FIBER NETWORKS - SAN JOSE, CA



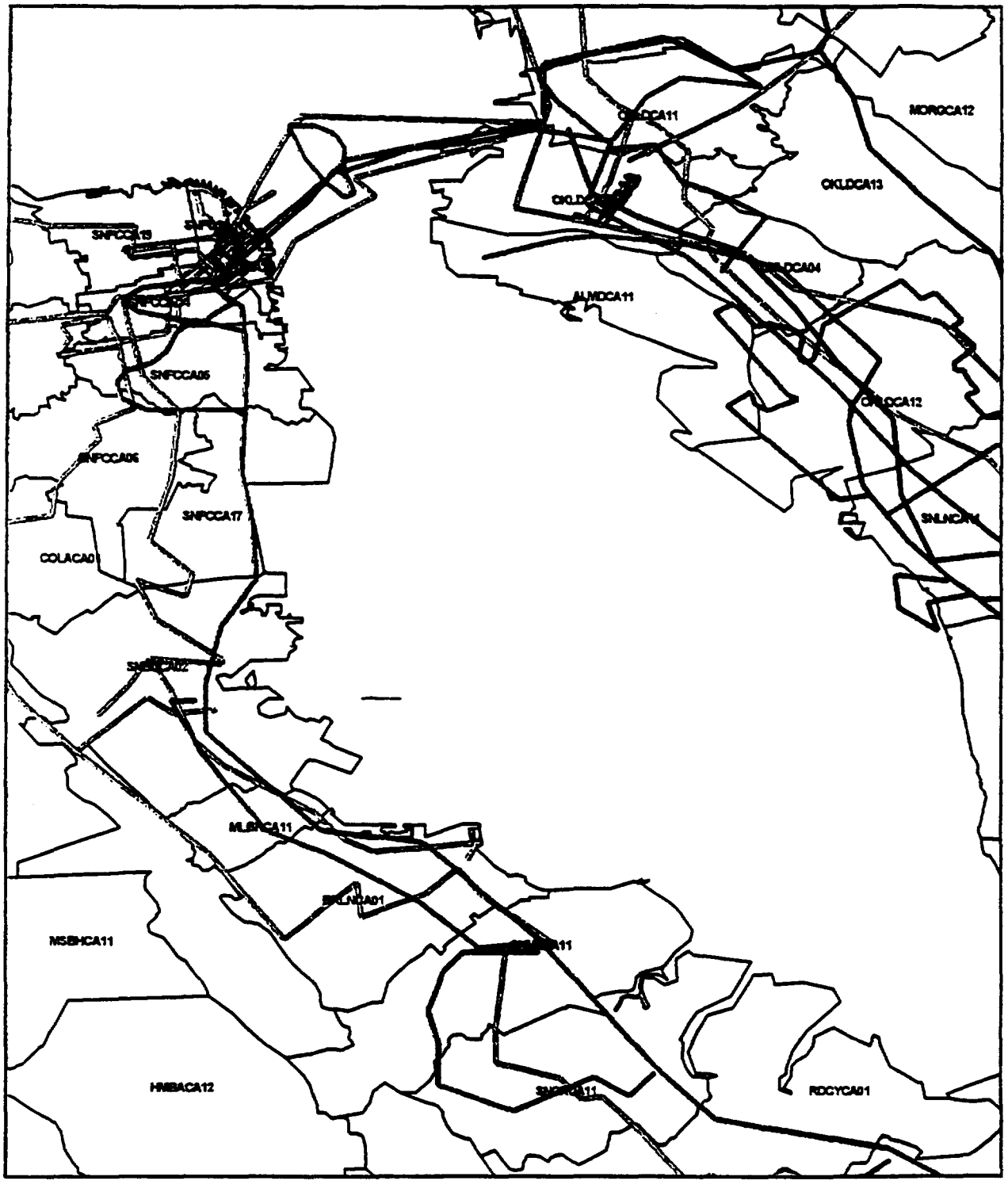
Brooks Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)
MFS Fiber (now owned by MCI Worldcom)

Highways

Pactel Wire Centers

N

COMPETITIVE FIBER NETWORKS - BAY AREA



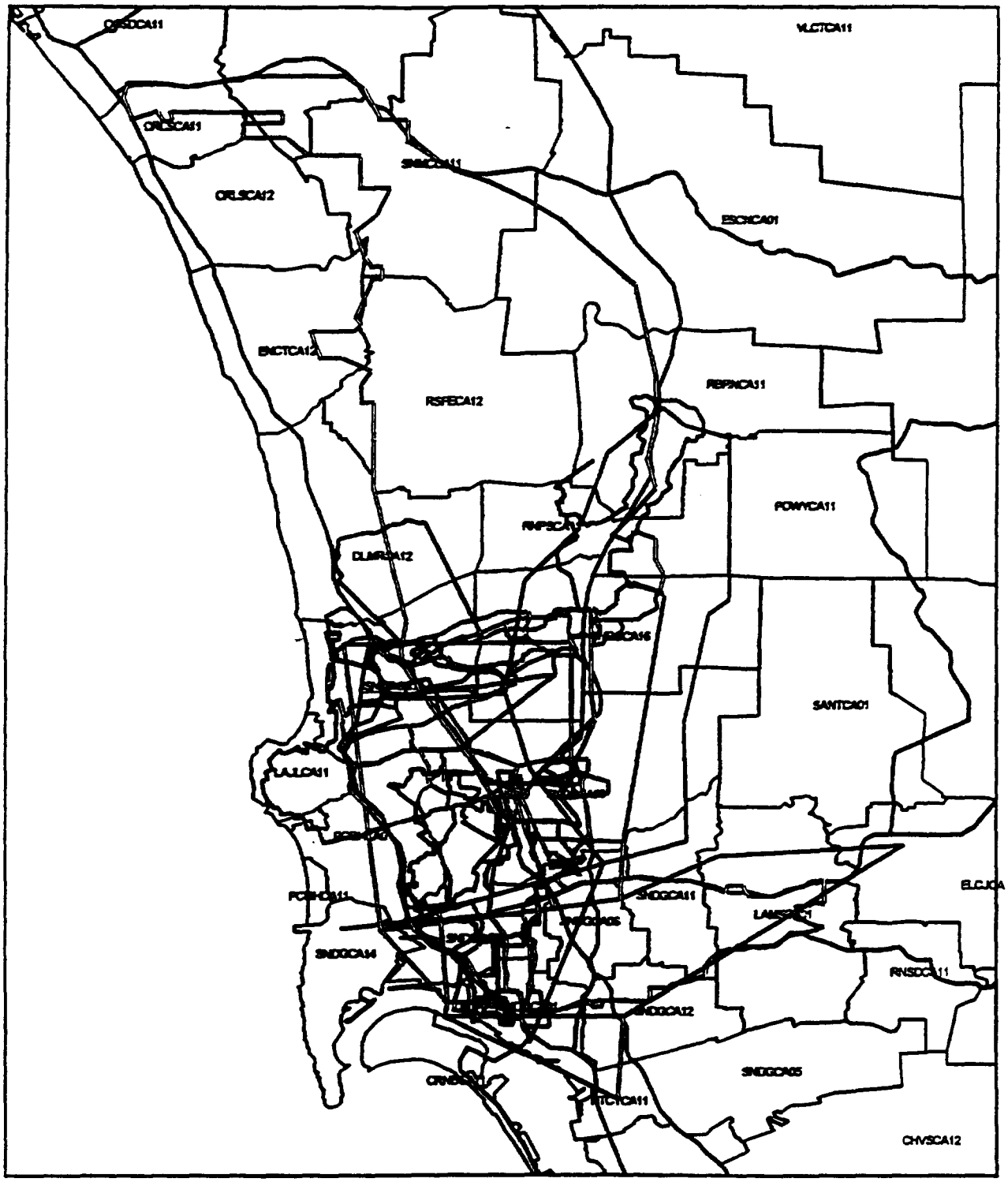
GST Fiber
ICG Fiber
MFS Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)

Highways

Pactel Wire Centers

N

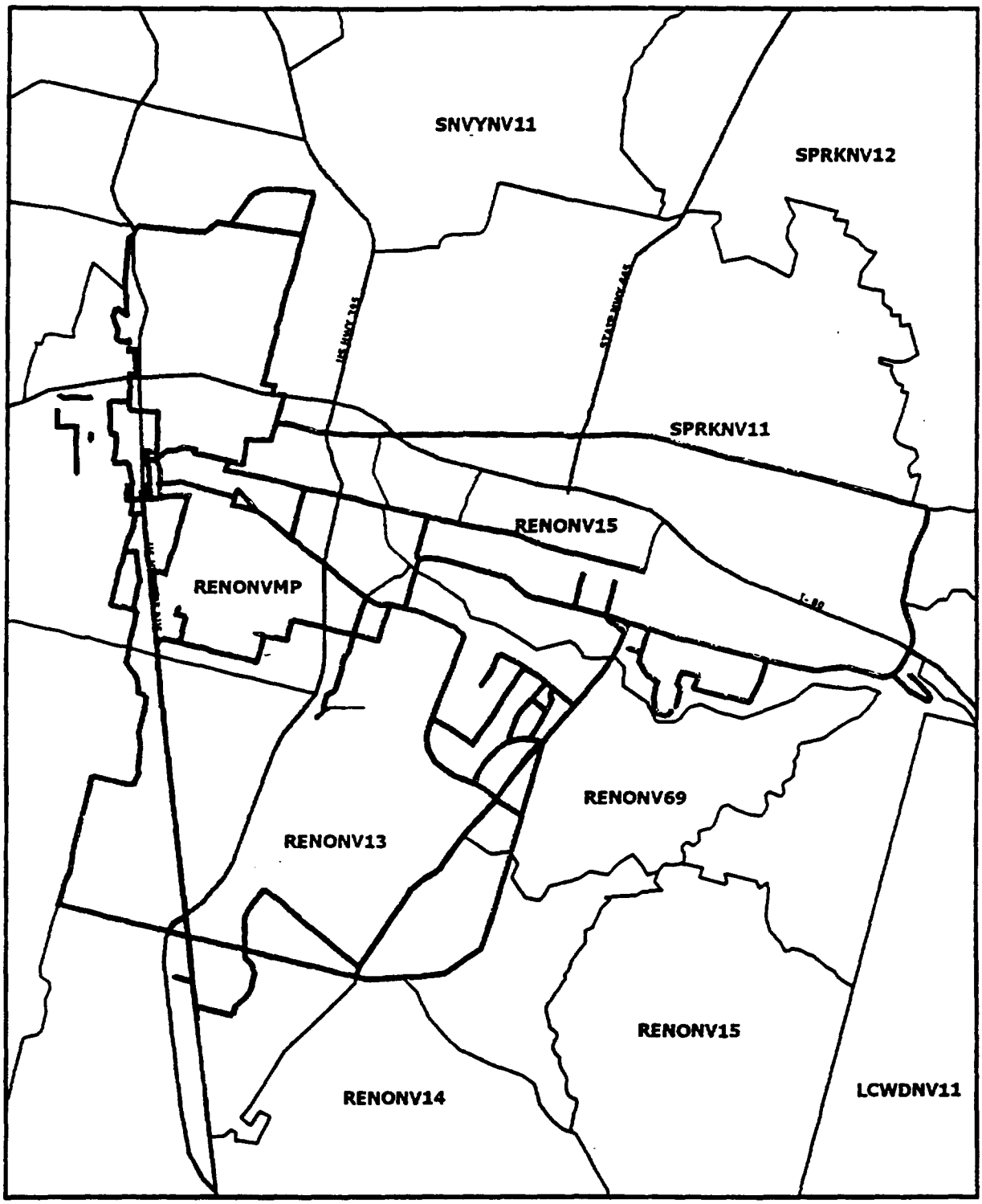
COMPETITIVE FIBER NETWORKS - SAN DIEGO, CA



ICG Fiber
MFS Fiber (now owned by MCI WorldCom)
Time Warner Fiber
TCG Fiber (now owned by AT&T)
Highways
Pactel Wire Centers

N

COMPETITIVE FIBER NETWORKS - RENO, NEVADA

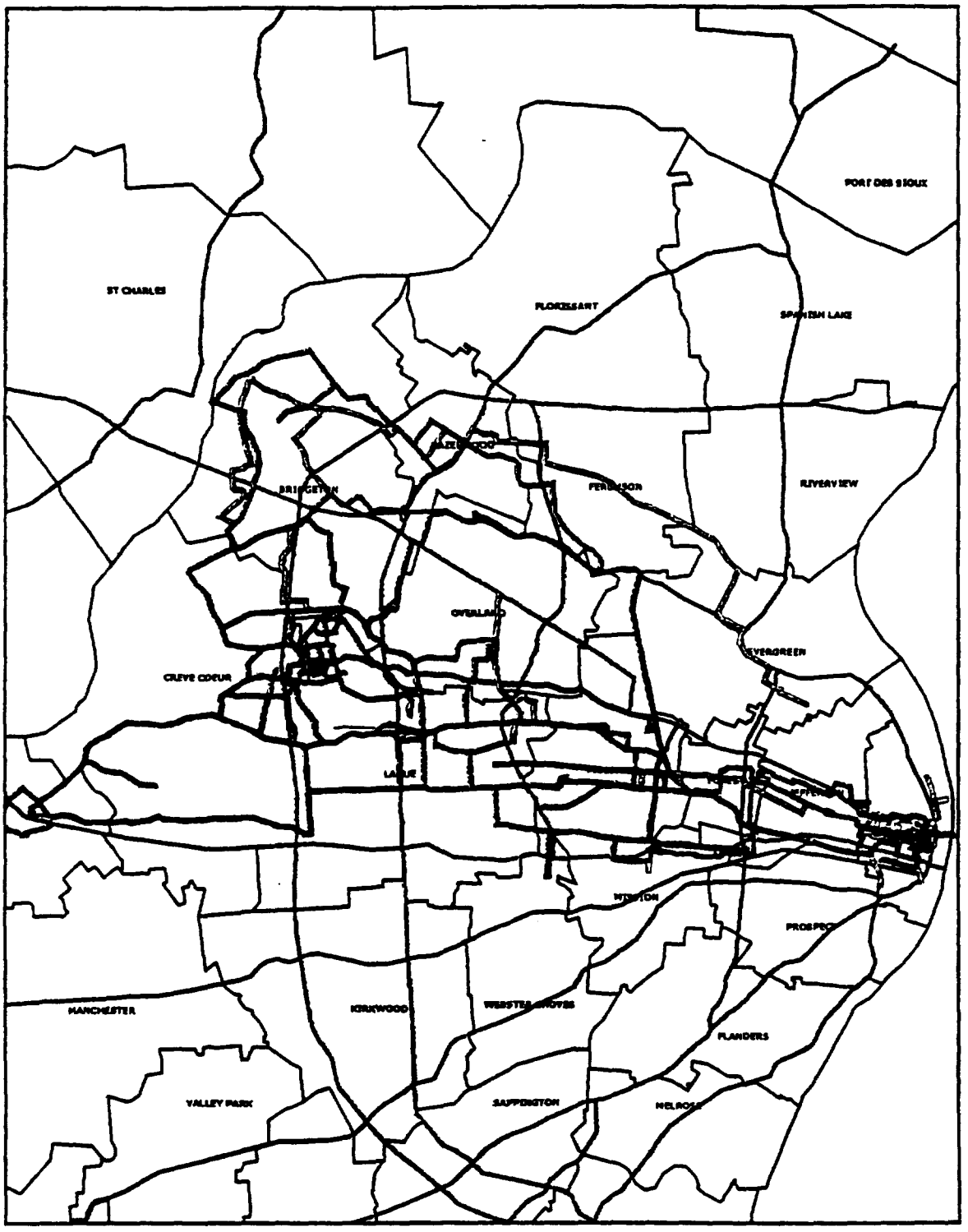


N

Brooks Fiber (now owned by MCI WorldCom)
Phoenix Fiber (now owned by MCI WorldCom)
Highways

Reno Wire Centers

COMPETITIVE FIBER NETWORKS - ST LOUIS, MO

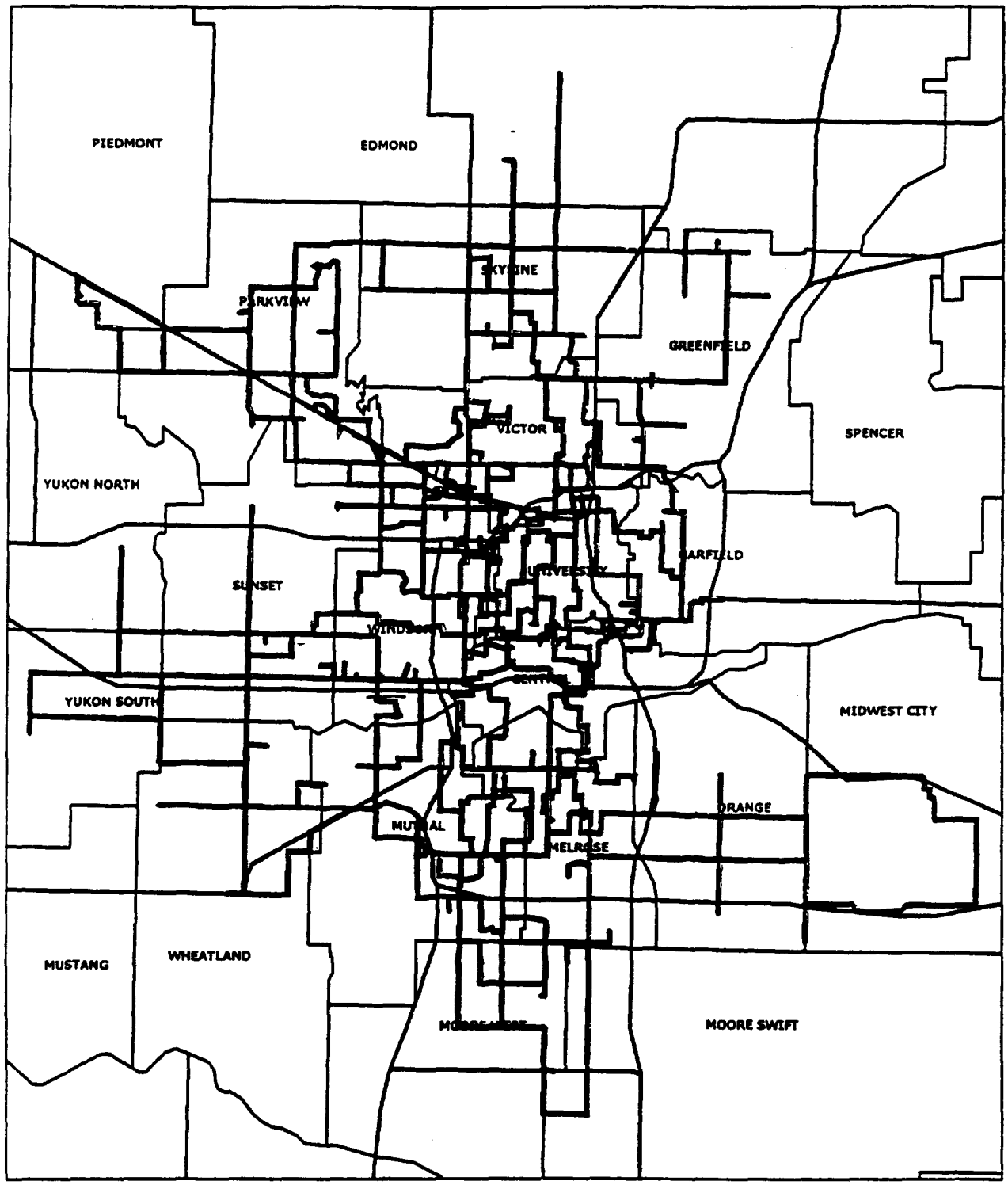


Intermedia (ICI) Fiber
MCI Metro Fiber (now owned by MCI WorldCom)
MFS Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)
Highways

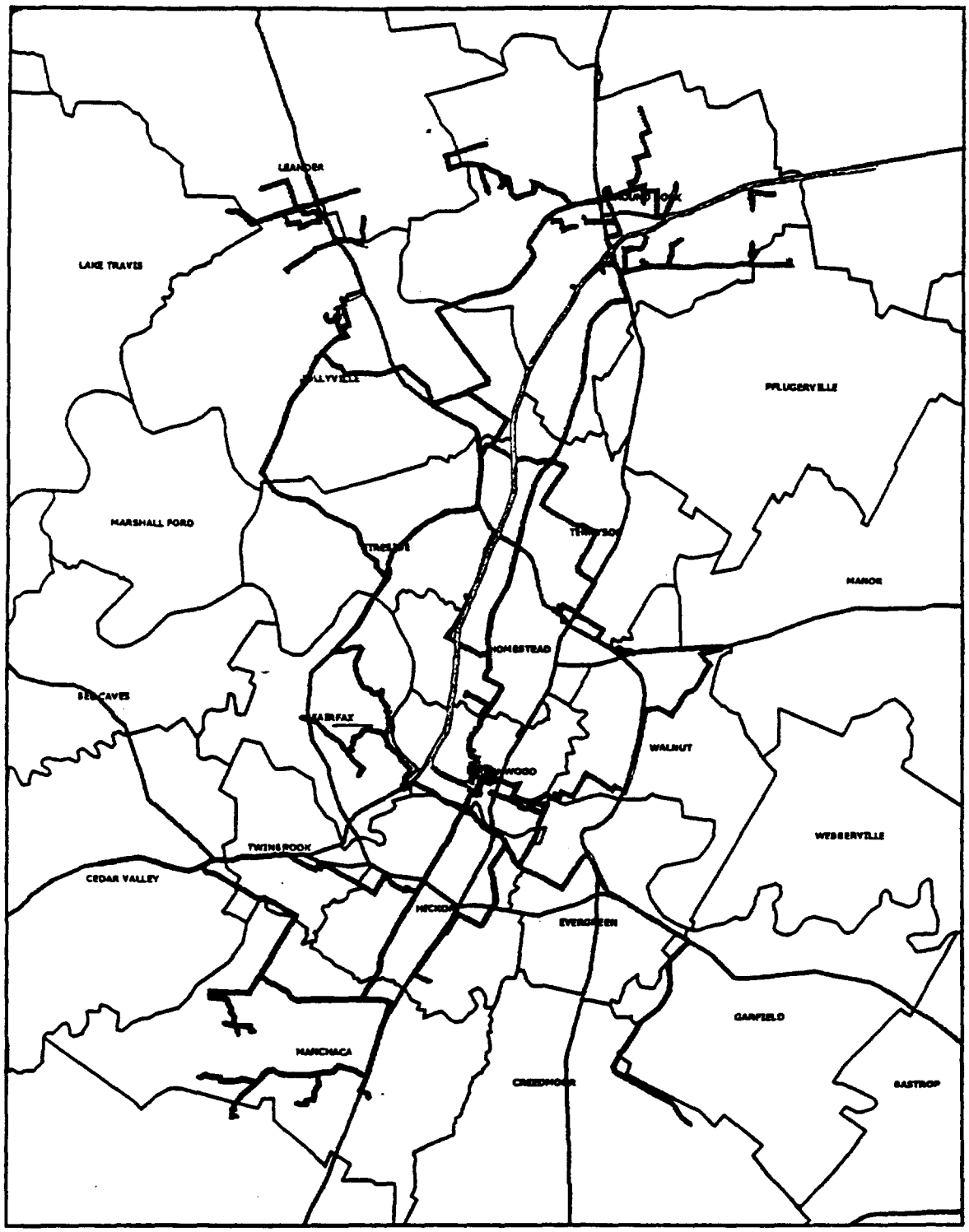
SWBT Wire Centers - St Louis, MO

N

COMPETITIVE FIBER NETWORKS - OKLAHOMA CITY, OK



COMPETITIVE FIBER NETWORKS - AUSTIN, TX

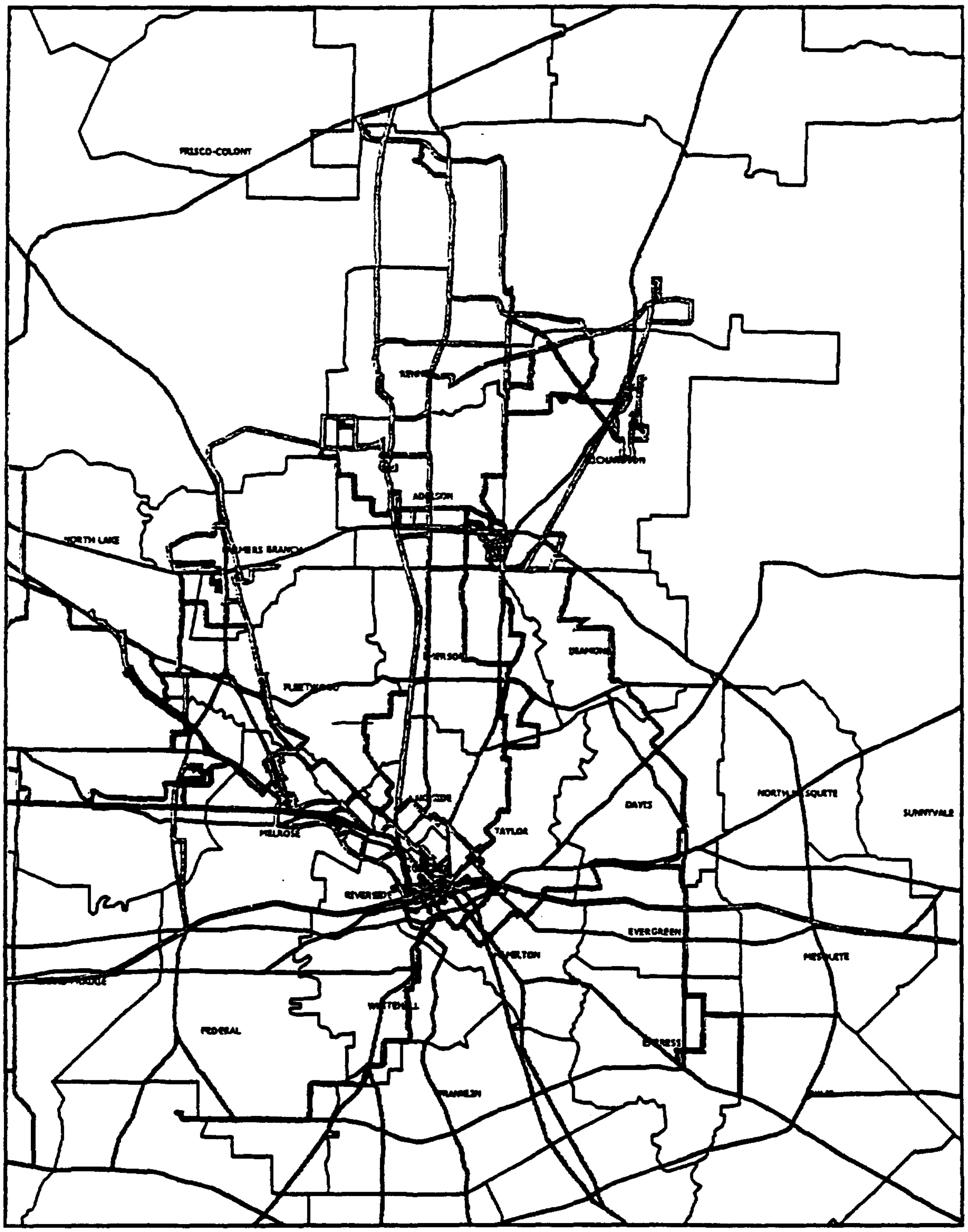


Brooks Fiber (now MCI WorldCom)
MCI Fiber (now MCI WorldCom)
Time Warner Fiber
Highways

SWBT Wire Centers

N

COMPETITIVE FIBER NETWORKS - DALLAS, TX

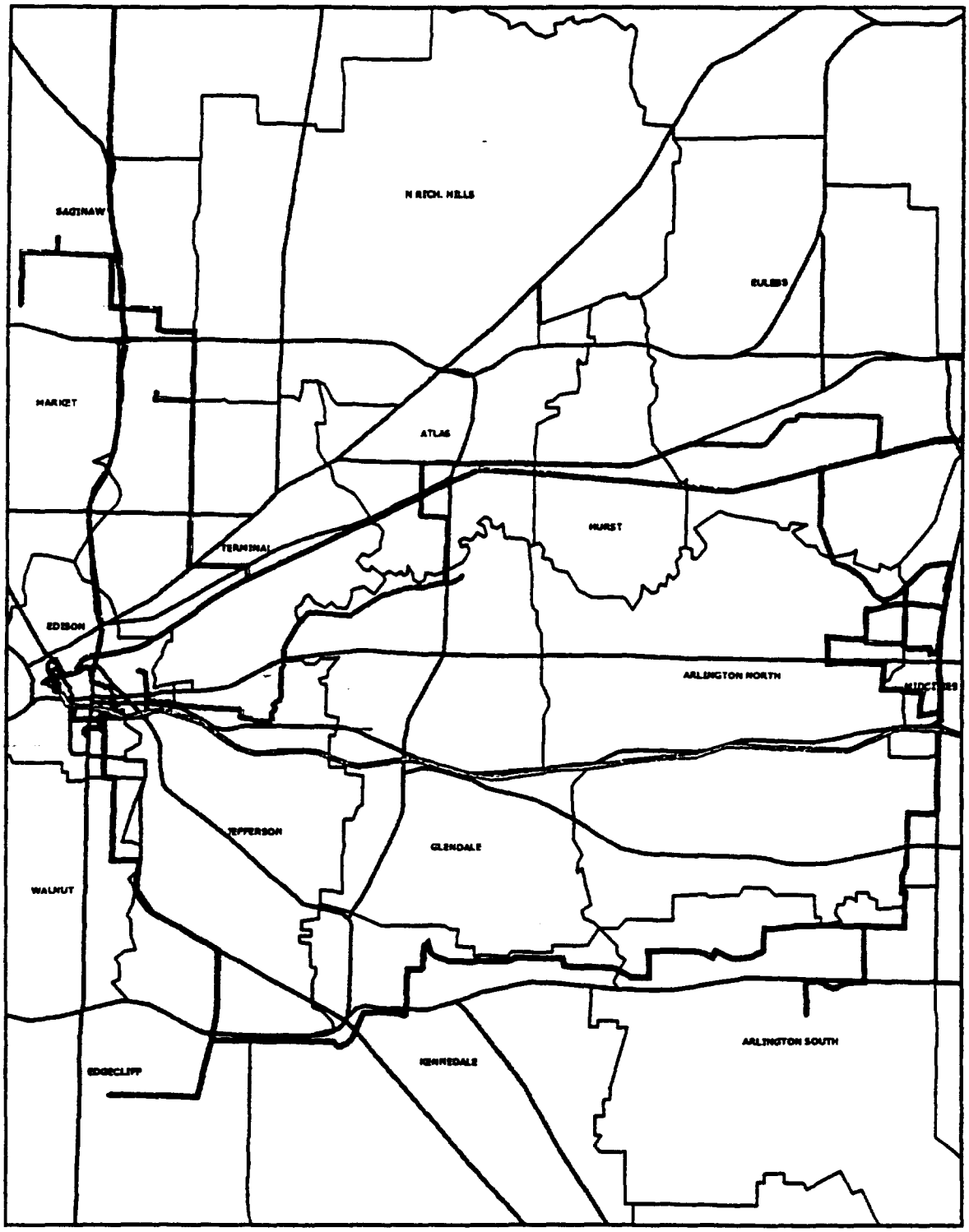


Brooks Fiber (now owned by MCI WorldCom)
MCI Fiber (now owned by MCI WorldCom)
MFS Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)
Highways

SWBT Wire Centers

N

COMPETITIVE FIBER NETWORKS - FORT WORTH, TX

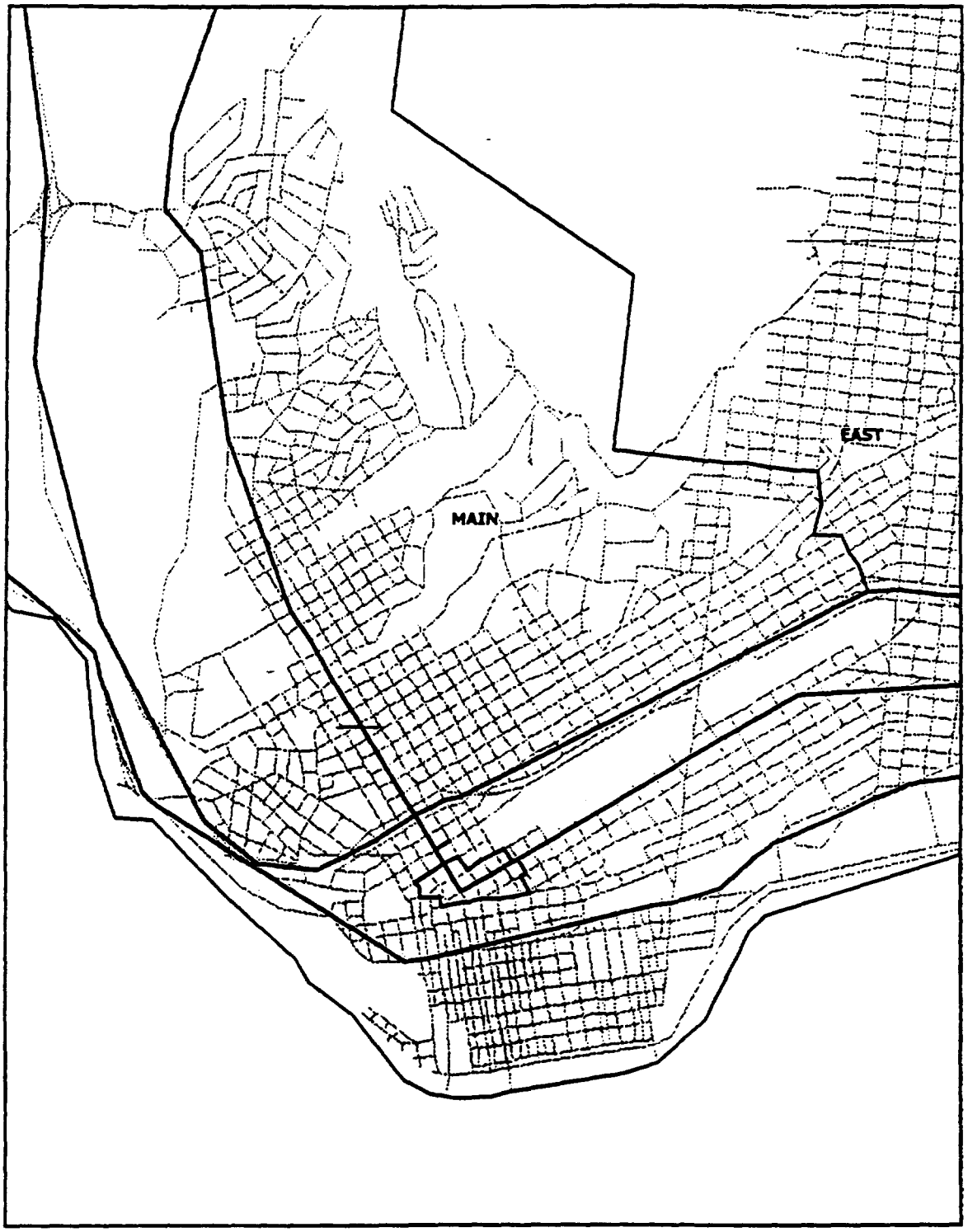


e.spire Fiber
MCI Fiber (now owned by MCI WorldCom)
Brooks Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)
Highways

SWBT Wire Centers

N

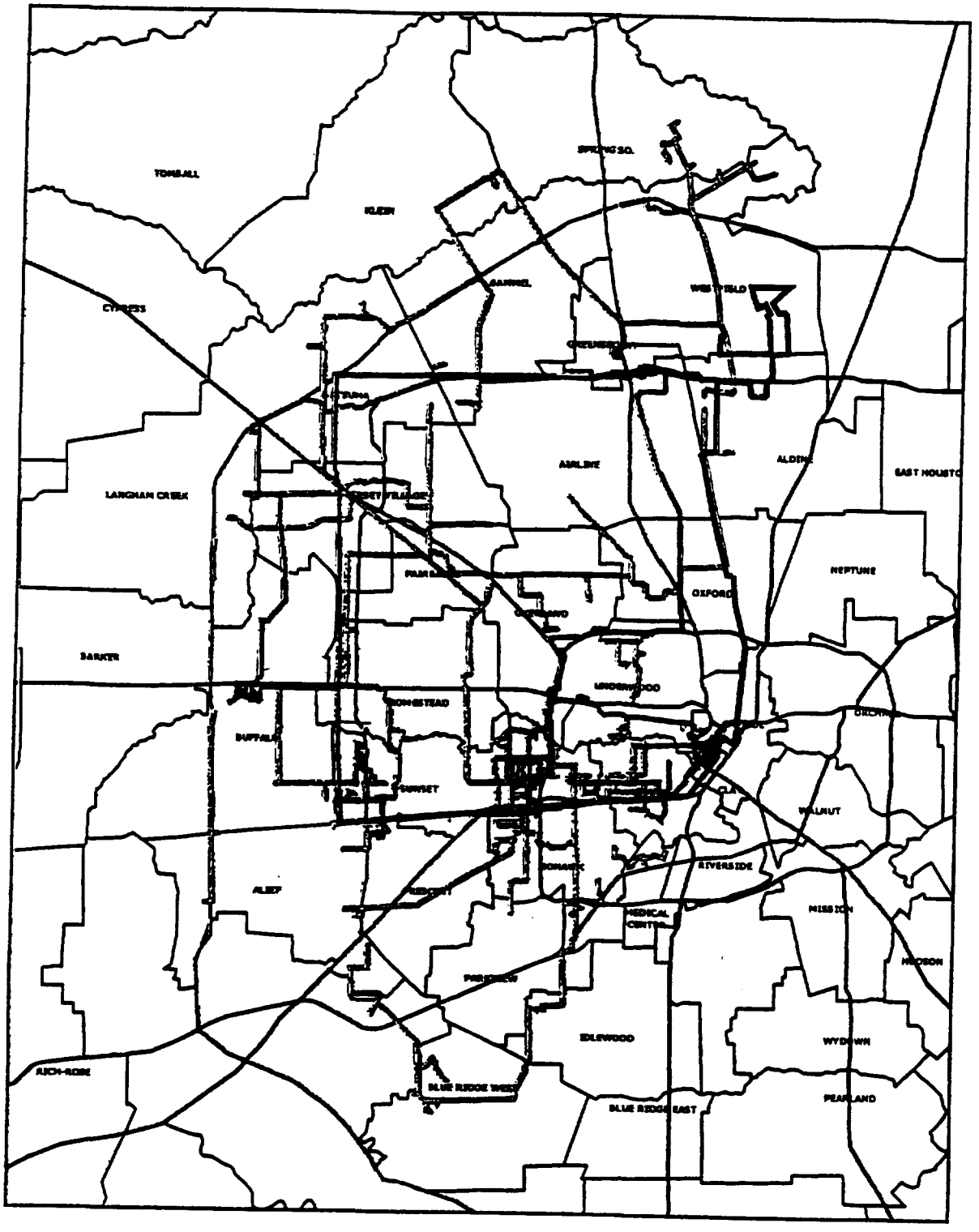
COMPETITIVE FIBER NETWORKS - EL PASO, TX



e.spire Fiber
Highways
Streets
SWBT Wire Centers

N

COMPETITIVE FIBER NETWORKS - HOUSTON, TX



MCI Fiber (now owned by MCI WorldCom)
MFS Fiber (now owned by MCI WorldCom)
TCG Fiber (now owned by AT&T)
Time Warner Fiber
Highways

SWBT Wire Centers

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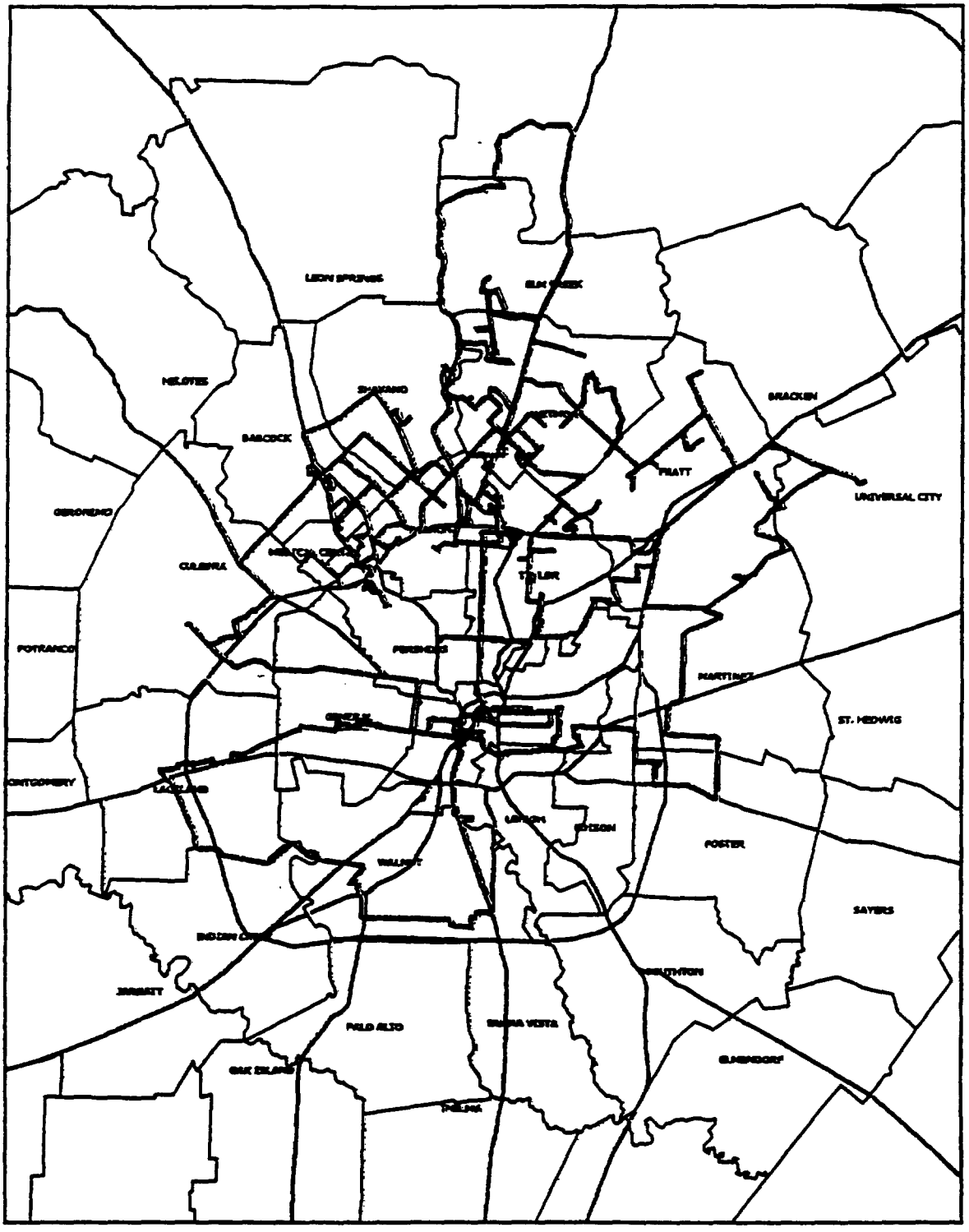
COMPETITIVE FIBER NETWORKS - SAN ANTONIO, TX



Brooks Fiber (now owned by MCI WorldCom)
Time Warner Fiber

Highways

SWBT Wire Centers

N